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# The NATION'S SCHOOLS

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## Conserving Human Values in School —Education's Challenge

*Do children lose more than they gain in school? Frequently, says this article, as it pleads for educators of broad vision who will encourage creative effort and a spirit of fearless freedom*

By HARRY S. GANDERS, Dean, Teachers College, Syracuse University

THERE is wisdom in the suggestion that educators might arrive at a saner evaluation of modern trends in education if insofar as it is possible they would view their problems through the eyes of parents.

Parents who fully appreciate the fact that their children, before entering school, already possess practically all of the most highly prized human characteristics, may be justified in questioning whether barren schools, such as they knew, will contribute to or actually retard the development of their children. Is it possible that some parents anticipate a loss rather than a gain? A partial balancing of human values brought to school by an average six-year-old boy against possible losses due to noneducative influences of the traditional school is the purpose of this discussion.

### *The Parents View Their Child*

To test the accuracy of the first sentence in this paper, let us attempt this juxtaposition, approaching the task from the point of view of parents who are about to start a normal six-year-old son to school. Let us assume that these parents had learned from the great philosophers and religious leaders of the ages that true happiness, for oneself and for others, constitutes the chief end of existence. No adult they had ever known, regardless

how much "school educated" he was, possessed the happiness which is their unschooled son's natural heritage. All day long he sings in his yard. To him rather than to schooled adults is the secret of true happiness known, and by him are joy and satisfaction achieved.

### *Nature's Endowment*

Father and mother knew their six-year-old son to be trustful—loving everyone. They rejoiced in his optimism, hope, self-reliance and self-confidence. No "schooled" individual they had ever known surpassed this tot in sensitiveness and in depth of sympathetic feeling. No human being was ever more sincere, more his own true self, intuitively detecting sham and counterfeit. Daily for five of his six years they had been supplied with incontrovertible evidence of his originality and of a creative power which somehow seems to have deserted adults of their acquaintance. His powers of reasoning, concentration and exercise of judgment had been a source of constant amazement. Often annoyed by their son's insatiable curiosity, they were surprised to read in learned books that curiosity is the primary and most significant motive for the growth of intelligence and that its continuance into adulthood is a characteristic of genius!

Because of his curiosity, his ceaseless activity and his entirely self-motivated endeavors, this boy almost single-handed, had so manipulated his schoolless, restricted environment, that he had learned to control his body. He had fixed major life habits. He had established fundamental emotional patterns. He had learned how to "manage" adults. He had achieved speech and had mastered one of the most complicated languages on earth. All this he had achieved without teacher or school, by himself. In his own way, with puny hands and baby heart, he had forced his meager environment to educate him, because within him God had placed the vital characteristics which contribute the only bases upon which education can be achieved by any living man.

#### *Conservation Not Change—The School's Task*

The foregoing characterization is but a partial inventory of supreme human values brought to school by every normal child.

Do our educational institutions, in spite of their important contributions to a day that is past, validate a parents' prayer that if the school cannot contribute significantly to the life of this, their child, may it at least conserve eternal values already possessed? Is it possible that if more schools from the kindergarten through the university interested themselves in conserving original attributes of self-reliance, cooperativeness, sensitivity, understanding, courage and reason, we should not be witnessing such general inability to cope with personal, national and international problems; such hopelessness regarding means to prevent war; such pitiable failure to effect a just distribution of wealth, and to solve our many social problems?

#### *A Plea for Courageous Leaders*

Is it possible that the feeling of utter helplessness with which a large proportion of our population face personal and national problems, is chargeable, in a measure, to educational institutions content in directing the easy and relatively less important task of mere memorization, when instead they should be building womanhood and manhood with ideals of social justice with experience in responsible conduct, with practice in self-motivated industry, with understanding and faith equal to the problems of their day? Remember, for such men and women as these, nature provides in every normal, unschooled child, an adequate foundation.

It is because of a living faith in the public schools, and not from a desire to criticize, that we plead for a larger number of American schools blessed with more courageous leadership and

staffed with teachers of broad vision; for schools permeated with a new and vitalizing spirit appropriate to our time.

Should standardization of organization and procedures, born of the necessity for accommodating the masses, be glorified as a mark of distinction as it is in so many schools? Or should principals and teachers marshal all their ingenuity to combat the blighting influences of standardization, recognizing it as a curse which wastes individualized experiences of children, blocks efforts aimed at making the school an educative environment and in some instances debases personality, stifles education and destroys rather than conserves many of life's noblest characteristics? Should dull monotony and unchallenged hours be the lot of American childhood because of a formalism ingrained in teachers whose abilities and energies are drained by unreasonable loads, and who then turn to the easier formal way as a means of escape?

It is unsafe to trust America's heritage to educators whose vision of our children and what they might become is blurred by an overconsciousness of systems.

#### *Making of School a Glorious Adventure*

Shall we longer tolerate, anywhere in our country, educational institutions which discount creative effort, which penalize originality, which fail to provide an opportunity for independent thinking, which by regimentation prevent adaptation and socialization? Shall we have schools in which the imaginative flights of children are made on leaden wings and where the spirit of adventure is dead? From such classes let America's youth be free! Let not schools hinder the growth of their personalities or block the way to their individual development.

Every child in democratic America has a right to grow in self-control and in responsibility, both at home and at school. This cannot be done in a school or in a home where, because of ignorance of child life, of incompetence or of laziness, only external controls are utilized. Schools as well as homes exist to provide the child with opportunities for self-development and for self-control, to encourage responsibility to his inner self and to direct his self-education which, of course, is the only education possible.

Fortunately for parents and for their children, there are in rural areas and in villages and cities throughout the entire country, thousands of modernized schools characterized by a recognition that children on entering school are already persons and that the school exists for each individual to enable him to develop daily in power and in attainment.

The philosophy, organization and operation of such schools rest on the premise that their chief task is not only to impart knowledge but to teach meanings, to add significance to daily living and to conserve and develop those individual qualities possessed by normal children that are so highly prized in adulthood—initiative, optimism, hope, trustworthiness, self-reliance, activity, curiosity, sensitiveness, sympathy, imagination and the ability to reason.

#### *Where Pupils Educate Themselves*

Accordingly a spirit of freedom and buoyance characterizes modern schools. Such institutions have become living centers where first things come first; where teachers are expected to be what they want youth to become; where young men and women have an opportunity to develop the traits enumerated which in manhood will make them great; where facts are subordinated to meanings; where the whole of education is for adaptation, understanding and responsibility.

These modernized institutions appreciate that if even one-fifth of their curricular offerings are less valuable than other materials that might be included, the mistake represents the waste of millions of dollars and of untold educational opportunity. Recognizing that sound education is qualitative and not quantitative, they place less emphasis upon the completion of the course and give more attention to the manner in which a project is carried on. The sources of motives and methods used by children in solving problems command more of the teacher's interest than how many examples are done.

In recognition of the fact that it is only what the young themselves do that educates them, instructors in these institutions force themselves to let individuals go at their own rates, utilizing the children's own impulses whenever it is possible to do so. They see to it first that they and their classrooms are rich sources from which children may win for themselves educational experience. They are sure not to stand in the way of the children's demonstrated ability for educating themselves.

#### *A Learning Not Narrowed to Books*

Curricular materials are not all done up in neat packages and labeled like specimens in a museum. Lifelike "activities" or "units" are developed which at each step necessitate teacher-pupil organization, classification and judgment. Such cooperative planning, organizing, evaluating and thinking concerning tasks to be done do not, as in the old school, rob youth of the richest educative elements in the whole procedure. Daily assignments are still the

vogue, but only as elements which pupils as well as teachers plan and which both recognize as essential steps toward achieving recognized goals. More attention is given to the appropriateness of units of subject matter in terms of pupil interests and abilities. Consequently, learning becomes more efficacious, with a resultant saving in time, which in turn makes feasible the introduction of the music, the rhythm, the art and the drama that every thinking man recognizes as necessary to our civilization.

One of our presidents has said: "Our stage of civilization is not going to depend upon what we do when we work so much as what we do in our time off. The moral and spiritual forces of our country do not lose ground in the hours we are busy on our jobs—their battle time is the time of leisure."

Perhaps most significant of all curriculum changes in the modern school is the utilization of the home, the church, the theater and the vacation experiences of young children. The general non-utilization of these by the "old school" represents the significant waste in education. No other change in curriculum and methodology so effectively unites parents and the school. The capitalization in classes of children's experiences gained outside the school is the educator's chief guarantee for parent-teacher cooperation in conserving the children's priceless attributes and in assisting in youth's educational enterprises.

#### *The New Education*

Administration of the new education exists to facilitate activities of pupils and the genuine professional worker, the teacher. It encourages and helps teachers to become the richest personalities and the finest professional workers that the extreme limits of their own capabilities permit. Under such administration, teachers participate in the formulation of policies, which is as educationally desirable and democratic as it is stimulating to individual growth.

Buildings are planned for flexibility. Every classroom is provided with many supplies and varied equipment which make a fruitful educative experience at least a possibility. Even the poorest homes provide a material environment far more educative in its possibilities than do classrooms in most educational institutions.

Teachers for these modernized institutions must have obtained a broad cultural education and life experience at least equal to that possessed by the most cultured of their pupils; otherwise, their charges will miss the opportunity of each becoming what the teacher herself should be—a charming person and an exceptional individuality infinitely worth knowing.

It is left for energetic, intelligent, finely trained administrators and teachers, committed at least to a minimum program of conserving and cultivating human values brought to school, to conceive the dream of the layman who said:

"It is not important to increase the amount of what is learned above that now usually taught to children. What is important is the spirit of adventure and liberty, the sense of setting out upon a voyage of discovery. . . . If education is given in this spirit, all the most intelligent pupils will supplement it by their own efforts, for which every opportunity should be provided. A generation educated in fearless freedom will have wider and bolder hopes than are possible for us, who still have to struggle with the superstitious fears that lie in wait for us below the level of consciousness. Not we but the free men and women whom we shall create, must see the new world, first in their hopes, and then at last in the full splendor of reality."

### Vocational Training—Education's Greatest Unsolved Problem

"Vocational training in the high school is the greatest unsolved problem of modern education."

This is the emphatic statement of Preston H. Smith, superintendent of schools, Bayonne, N. J., who discussed the need for technical and vocational training of high school pupils at the National Education Association meeting in Washington, D. C.

"Present day business requires a different type of training from that offered by the usual commercial course in typing, stenography and bookkeeping," Mr. Smith points out. "A reorganization of the commercial curriculum is needed in order to provide a training that will ensure growth."

"Modern industrial conditions are increasing the demand for trained workers. The present two-year vocational school is not able to give the needed trade related knowledge and the technical insight required of the so-called intermediate division of workers. A high school has no claim to be called democratic that is not preparing for this junior engineering group. The aim should be not to produce technical trade skills but rather to give an understanding of the basic principles that underlie industrial processes."

"It is essential that the objectives of the high school be set up as definite goals. Prominent among these is preparation for business and industry. In the future the schools with programs of vocational and technical training will be the ones that find ample justification for their existence."

### Public School Property Has Valuation of More Than Six Billion

The latest valuation of school property in the United States represents a total of \$6,211,327,040, according to information made available recently at the Office of Education. This large investment, it was explained, is the value of all property used for public elementary and secondary schools in 1930. No more recent statistics are available.

Between 1928 and 1930, the valuation increased from \$5,486,938,599, or approximately \$725,000,000. Other statistics disclose an increase in expenditure for the public elementary and secondary schools from \$2,184,336,638 in 1928 to \$2,320,776,036 in 1930.

The value of school property per pupil enrolled varies from \$407 in New York to \$72 in Georgia. States, such as New York and California, expended approximately five times as much per pupil enrolled as such states as Georgia and Mississippi. For the United States, the value of school property per pupil enrolled was \$242 while the expenditure per pupil enrolled in the public elementary and secondary schools was \$90.38.

In 1930, 82.9 per cent of the pupils enrolled attended school daily. Actual enrollment in the public elementary and secondary schools was 25,678,015, while those in average daily attendance numbered 21,264,886.

Public school property for elementary and secondary schools exceeds \$100,000,000 in sixteen American states. New York valuation is \$871,000,000; Pennsylvania, \$512,000,000; Illinois, \$441,000,000, and California, \$427,000,000. The valuation in Ohio is \$409,000,000; in Michigan, \$338,000,000; in New Jersey, \$292,000,000, and in Massachusetts, \$243,000,000. The valuation in Texas is \$206,000,000, while in Connecticut, Indiana, Iowa, Minnesota, North Carolina and Wisconsin, it ranges above \$100,000,000.

#### *What Schools Spend Per Pupil*

Expenditures per pupil enrolled vary from \$26.18 by Georgia to \$168.81 by New York. The District of Columbia expends \$156.44 per pupil enrolled, Nevada, \$152.71, and New Jersey, \$148.52.

Six states expend more than \$100,000,000 annually on public elementary and secondary education while one, New York, spends more than \$360,000,000. The states which spend more than \$100,000,000 are: California, \$148,000,000; Illinois, \$154,000,000; Michigan, \$119,000,000; New Jersey, \$117,000,000; Ohio, \$145,000,000; Pennsylvania, \$184,000,000.

# The Depression as an Incentive in Preparing Rural Teachers

*With the adjustments made necessary by the present "hard times," more teachers are being forced into the rural field—a condition that is a direct challenge to teachers' colleges everywhere*

By JAMES B. PALMER, Director of Rural Education, State Normal School, Potsdam, N. Y.

TEACHER training institutions are beset by their full share of perplexing problems during this period of widespread financial stress. No discussion of this topic can fairly omit the mention of the following questions:

1. How can the morale of a faculty be maintained best after salary cuts have been distributed evenly or unevenly, as the case may be, or a serious reduction in the staff has been made?

2. At what points should operating expenses be cut to fit a decreased budget for such expenses?

3. What adjustments can be made for the con-

tinued use of housing facilities which were provided for an enrollment far below the present one?

4. Because of forced economy, is there special reason to reevaluate the desirability of assigning certain activities now included in preservice training institutions to inservice agencies instead?

5. To what extent and in what ways can the personality traits demanded by the new type of schools be developed in teacher training institutions?

6. To what extent and in what specific fields is revision desirable in curricula for preparing



*The well trained rural teacher will play an important part in the activities incorporated in the newer techniques of learning in one-teacher schools.*

teachers for work in schools in a new social order?

7. To what extent does the present surplus of teachers present a need for the more careful selection of entrants to teacher training institutions? How may selection be worked out best?

8. On what basis should the process of elimination be extended at this time for an upgrading of the product of teacher training institutions?

9. To what extent should the present oversupply of teachers be used as a just cause for lengthening elementary teachers' courses beyond two, three or four years of preservice education?

10. Are the increasingly widespread developments in teacher training essentially statewide problems and hence definite parts of a program for the state carried out through the state department of education?

11. What effects are the present oversupply of teachers and economic hard times having on the placement problem of teacher training institutions?

12. How may preparation for placement be handled best when predictions of supply and demand in various fields break down and "catch as catch can" policies seem inevitable?

Many of these perplexing problems have their own local complications. All of them must of necessity come in for some attention even though mere expediency for the time being rather than long time planning will have to serve in some instances. A thoughtful consideration of these problems reveals certain major responsibilities which teacher training institutions should assume.

It is the purpose of this paper to discuss at some length one of the most important of these responsibilities—the preparation of teachers for rural elementary schools. It is a responsibility closely tied up with the preceding questions, especially Questions 5 to 12. It is my belief that more than rural specialists and existing rural departments are concerned, because the times demand greater attention to rural teacher training on the part of agencies which in the past have paid little or no attention to this field.

### *Two Important Considerations*

A careful study of this responsibility brings into bold relief two important considerations: (1) Since more and more teachers with full normal school or teachers' college training are being forced into the rural field, teacher training institutions must capitalize on this development so that it will produce a lasting demand for well prepared rural teachers; (2) the economic crisis as it has been and is now affecting the agricultural industry and rural life brings to an abrupt focus the obligation state supported teacher training insti-

tutions must assume in the making of a new rural social order.

The responsibility first mentioned—that of capitalizing on the tendency for a larger proportion of highly trained teachers to enter the rural field—is a result of the distinct reduction in the number of city positions ordinarily open to graduates of two, three and four-year courses.

A glance at the field of elementary schools reveals that the rate of turnover in the teaching staffs everywhere, and especially in city elementary schools, will decrease for at least a year or two. In city schools in particular, most of the teachers who have an opportunity to sign contracts again will be pleased to do so. A considerable number of the vacancies occurring are being filled by combining classes. Abbreviating or eliminating some of the special features of our city school systems will result in a shift of special staff members to some of the openings in the regular classrooms. Reduced budgets will force retrenchments in all phases of the school systems. City teachers as well as others have had to accept salary reductions. Many former teachers, married and unmarried, are anxious to reenter the profession because other fields of work are now less profitable or because husbands or relatives are out of work.

### *A New Problem of Placement*

Because of these and related developments in the field, teacher training institutions are faced to an increasing extent with the problem of placement. They must of necessity turn to the rural field. The time when the demand for graduates of all courses was so great that specialization in particular fields was a secondary matter is no longer with us. Because of this shift in emphasis, it is of increasing concern now for institutions to prepare prospective teachers in and for rural school work where positions can be found.

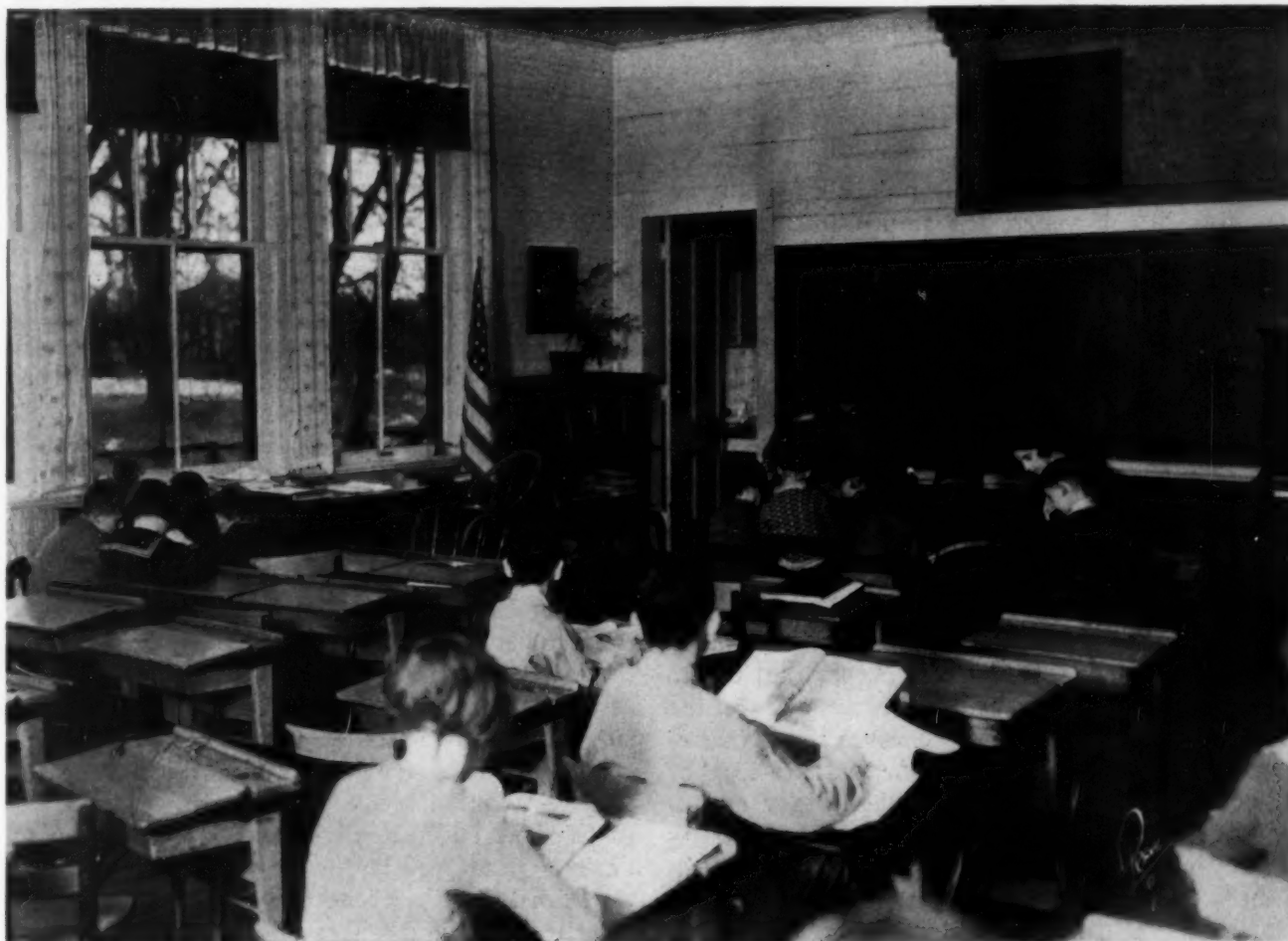
The great influx of students to teacher training institutions in the last few years is another reason why better trained teachers are going into the rural schools. The situation in New York State is in certain respects typical of that in many other states. During the war period the enrollment of New York State normal schools and teachers' colleges dropped from 3,328 in 1914 to 1,855 in 1918. From that low point of 1,855 in 1918, it changed to 8,000 and over in 1931. Along with this growth in enrollment, the length of the curriculum was changed from two to three years in 1922, and in 1926 the State Normal School, Buffalo, was made a teachers' college.

The one-year teacher training classes in high schools in New York also showed the effects of

the changing times. In 1914 there were 101 of them with a total enrollment of 1,114. In 1927 there were seventy-eight of them with a combined enrollment of 1,383. Two of these maintained a two-year course for the preparation of rural teachers. It is not surprising, therefore, that the number of temporary licenses granted in the state changed from 3,400 in 1919 to practically none in 1931. The number of graduates of these various

ment in normal schools and teachers' colleges makes an increase in the period of training and a more careful process of selection and elimination advisable. The limited demand for teachers in city schools will in turn force more such graduates into rural positions.

The fact that more and more graduates of normal schools and teachers' colleges are going into the rural schools can be shown best by an illus-



*Constant participation of the pupils in all activities is a feature of this modern one-teacher demonstration school at Potsdam, N. Y.*

teacher training institutions now more than meets the annual need for new teachers in the schools. The supply of legally certified teachers exceeds the demand.

This increasing supply of teachers, coupled with the state policy of raising standards of preparation, led the New York State Board of Regents to set two years of preservice training as the minimum for all new entrants into the profession after 1934. The number of the training classes has dropped to thirty-six this year and ten more are expected to close this June. This action will by 1934 make available to normal school graduates about 1,000 more positions in the rural field than was formerly the case. The increased enroll-

ment drawn from the situation in one particular school where a careful study has been made. In 1918, this and the other normal schools in New York State had little reason to be concerned with the problem of preparing teachers for rural schools. The almost insatiable demand in city school systems readily absorbed the bulk of the graduates. By 1927 the circumstances were different. In that year 50 per cent of the graduates of the three-year normal school course at this institution were placed in rural schools. (The term "rural schools" in New York State refers to schools under district superintendents of schools or schools in communities with a population of 4,500 or less.) Four per cent were placed in one-

room schools. In 1931, 64 per cent were placed in rural schools and 20 per cent in one-room schools. This did not include forty-three students who left at the end of the second year to teach in one-room schools with a limited certificate. Of the graduates of all the normal schools in the state in 1931, 40 per cent took positions in rural schools as just defined. All this development occurred without influence from departments of rural education established in three of those schools in 1929.

#### *Those Who Are Involved*

I have tried to show that the surplus of licensed teachers, the increase in the number of graduates of normal schools and teachers' colleges during the past fifteen years, the improvement of the standards of certification and especially the striking effects that the depression is having on the number of openings in city schools, force upon normal schools and teachers' colleges the function of preparing rural teachers. Many graduates will go into such schools if they are to be placed at all. Properly capitalizing on these interrelated circumstances will encourage marked progress in the preparation of teachers for rural schools, which no less an authority than E. S. Evenden says is one of the most challenging problems facing teacher training institutions.

This matter is not one of minor or secondary significance. It involves nearly 50 per cent of the more than half million elementary teachers in the United States. It especially concerns the improvement of the work in 200,000 one and two-teacher schools, affecting directly the elementary education of five million country children. The striking improvement of the education of five million children is a matter for grave consideration. A state like New York, boasting of its large urban centers, still has 7,166 one-teacher schools with an enrollment of 150,000 children. Outside of New York City more than half of the elementary school teachers and about half of the children in New York State are to be found in rural schools.

A problem of such magnitude and one which is at all times critical, warrants immediate, serious and persistent attention. It is not advisable to wait for consolidation or centralization of schools as a partial solution, especially as a depression defers such changes. Circumstances are now placing graduates of two, three and four-year courses in the smaller rural schools. This brings heads of teacher training institutions face to face with the question of whether or not these graduates are properly trained for rural teaching.

This, in turn, raises the much discussed question of how best to prepare prospective teachers

for successful rural service. It is no longer necessary to justify the assumption that some specialization in training is essential for the adequate preparation of teachers for rural schools, with one and two-teacher schools as the more critical part of the problem. Numerous nationwide studies<sup>1</sup> have shown that the large majority of administrators and experts concede this point. There is, however, a considerable difference of opinion as to how to provide this specialization and to what extent specialization need be provided. There are two general types of organization which have been set up and tried. In one form of organization, all prospective elementary school teachers are required to take a certain amount of special training for teaching in rural schools. This holds, no matter whether the student is pursuing a kindergarten-primary, intermediate, grammar grades or junior high school course. In the other form of organization, the training for rural teachers is set up as a fourth type of specialization in the elementary teachers' curriculum. In this type of specialization, four-fifths of the rural curriculum is the same material as that given to all students in the elementary field. The other fifth deals with specialized material including observation, participation and responsible teaching in rural schools.

While circumstances may alter the nature of the problem in different places, experience with the latter scheme and a study of the possibilities of both, lend preference, it seems to me, to the rural teachers' course as an elective field parallel with the courses for graded city schools. A rural teachers' course seems quite desirable and fully justified as long as specialization is provided on various grade levels for city positions. Such a plan draws to it a group of students interested in the rural field and makes possible a specificity of training that is not readily attained in a general offering of rural work to all students. It tends to bring about the organization of a department charged specifically with the duty of rural teacher training. This further tends to make teachers in other departments conscious of rural teacher preparation as a specialized problem and serves as a center for consultations on that problem.

#### *Guiding Students Into the Rural Field*

There are, however, certain difficulties inherent in this second plan. There is the problem of inducing students to elect a field having in many respects a less attractive outlook. It involves the shifting of a student enrollment from courses preparing them for city positions, of which a limited

<sup>1</sup>Carney, Mabel, National Society for the Study of Education, Thirtieth Year Book, 1931, p. 166.

number will be open, to another field where positions are more likely to be obtained. Just now the placement problem is sufficiently one-sided in New York State as well as certain other states to give abundant reason for guiding many students to the rural field. A cumulative index of supply and demand in the various fields of teaching would help materially as a basis for such guidance. It should be used to the fullest extent in the direction of students into fields of service consistent with their abilities and with the openings available. Rural teacher training will profit greatly from such an approach to the problem.

### *She Who Succeeds Best*

It is true, however, that prediction breaks down in times of economic stress. This can be shown best by reference to two studies in supply and demand that have been made in the State of New York. In 1927, on the basis of an exhaustive study, it was predicted that approximately 3,500 new teachers would be needed in the elementary schools in 1931, but in a subsequent study in 1931,<sup>1</sup> it was found that an excess of more than 3,500 qualified teachers for elementary schools were available.

As the situation now exists it is too often assumed that if a teacher is well trained for a position in a city school, she is adequately trained for rural teaching. A new type of certification by the state, requiring additional work for those trained for graded positions in cities before they can take positions in the smaller rural schools involving two or more grades to each teacher, would force a more careful consideration of the field elected by prospective teachers. Because we do not have such certification and because of the relatively sudden change which is turning many students without specialized training into the rural field, perhaps a temporary expedient is desirable.

It may be wise temporarily to require seniors other than those in the rural teachers' course to take a certain amount of work in the rural department to assure a greater degree of success than might otherwise be the case. This is suggested and, in fact, is being practiced in institutions maintaining rural departments, not as a compromise between the two plans but rather as a necessary expedient for the time being. The danger of giving the impression that this minimum rural training is an adequate amount is recognized. The question is whether some special training is better than none. It is hoped that the preference naturally given to fully trained teachers for the larger number of openings in the rural

field will restore in time a proper balance to the enrollment in the various elementary courses.

There is also the question of whether the prospective teacher should be encouraged to take the rural teachers' course when she plans to use a position in a rural school as a stepping stone to a city position. Since the rate of turnover in the personnel in rural schools is rapidly decreasing, especially at this time, the length of service of such transients is likely to be a period of years. If this is so, the logical procedure seems to be to require initial rural training. During the period of service, additional professional preparation can take care of the need for specialization on specific grade levels if that is necessary.

The following considerations are essential: Do not rural children deserve a teacher who is educated and trained adequately to teach the school she serves? Does not the success of a teacher in the rural field condition her chance of placing elsewhere? Should she not be trained for successful work in that first field?

It is granted that the increasing necessity for good students to accept one and two-room school positions promotes the improvement of the teaching personnel in such schools. It does so, however, only on condition that they know how to do good work in such a position. A broadly educated, cultured teacher who stays in a rural position for two or three years only is better than one of less ability and education who may stay permanently. But even the best educated, most cultured teacher must be well prepared if she is to know how to teach well a small group of ungraded children in an isolated one-room school.

I do not maintain that successful teachers in rural schools need to be so different as to be labeled "queer" or "ruralites." However, tolerant, broad-minded, sympathetic teachers who understand the important problems of rural life and who are experts in teaching under the relatively difficult circumstances of one and two-teacher schools are an absolute necessity if rural children are to have a fair chance in life.

### *Why Training Should Be Specialized*

There is at this time an unusually fine opportunity to place the specialization for teaching in rural schools on a high plane equal to that in any other elementary teachers' courses. No other disposition of this problem can be considered as anything but an inadequate and unsatisfactory solution. Many administrators of teacher training institutions have not fully recognized the fact that comparisons of the teaching in rural schools with that in other schools have involved the contrast of teachers untrained or with a short course in train-

<sup>1</sup>Bureau of Educational Measurements, State Department of Education, Albany, N. Y., Mimeographed Report, 1927, Teacher Supply and Demand, unpublished, 1931.

ing with those who have graduated from two, three and four-year courses. Is it any wonder that the present opportunity to provide a high grade of specialization for a most difficult type of work is heralded as a chance for unprecedented progress? To lose sight of the need for adequate preparation for rural teaching on the part of students well trained for a different type of work is to fail utterly in bringing about the progressive improvement of rural teaching that now seems to be possible.

There is another reason why it is especially necessary that these teachers with more extensive general training who are going into rural schools should also have special rural training. If they are to be retained permanently in rural schools, or if equally well trained teachers are to be demanded in their places after the period of the depression is past, they must have impressed the value of their higher grade services strongly upon rural superintendents, rural trustees and rural communities to such an extent that these citizens of the country districts will not willingly let them go and accept in their places once more the more inadequately prepared, less mature teachers of the past. But certainly these better teachers will not produce this desirable result if they are not trained in a sufficiently special way to make a striking difference in the quality of instruction in the smaller schools.

This situation is illustrated by the fact that a considerable number of rural superintendents and rural school boards prefer for positions in one and two-room schools, teachers who have one year of specific training for their work to others who have not had such special rural training in a three-year course. Such an anomaly arising from the influx of normal school and teachers' college graduates who are and will be going into one and two-room schools should certainly be avoided.

#### *The Challenge to the Teachers' College*

Important as is the rural teacher training situation presented so far, there is an even greater responsibility facing teacher training institutions. The economic crisis as it affects the agricultural industry and rural life increases manyfold the obligation state supported teacher training institutions should assume in the making of a new rural social order. It is one that cannot be avoided and one that is rapidly becoming more and more serious.

No one of our great industries is in a more deplorable condition than is agriculture, basic as it is to all civilized life. The breakdown of our banking systems has swept through the small towns and villages, wiping out the life savings and operating funds of thousands upon thousands of farm people. The number of bankruptcies of farm owners and operators has reached an appalling figure.

The ratio of prices received for products to the prices paid by farmers for the bare necessities of life has been unfavorable for years, and within the last year has become alarmingly disproportionate. The system of taxation based on real estate was formulated for a pioneer civilization. It now places an almost unsurmountable handicap on the farm business with other conditions as they are. The present system of distribution, developed as it was in an undirected trial and error way, is now grossly unfit to handle efficiently the abundance of produce available for distribution. The number of farms that are now in the hands of banks and insurance companies is tremendous. The conditions arising to a large extent with the industrial era are now reacting to the distinct disadvantage of the operation of a farm of the type familiar to all. The present economic stress and strain must, it seems, cause a radical adjustment in the whole agricultural industry, disrupting rural life with its priceless heritage and affecting every part and parcel of our national life.

#### *Keeping Pace With Sweeping Changes*

Sweeping changes in the organization of the agricultural industry are certain to result. The unfortunate circumstances mentioned are merely the symptoms of deep-seated maladjustment. The new order may take the form of corporate or "big business" farming with its monopolistic tendencies and serious labor conditions and employment problems. The fact that tremendous areas of farm lands now held by banks, insurance companies and the like must in some way be operated points in this direction. Such a change tends toward the development of a system similar in many respects to the feudal system with its peasantry as it existed in ancient times. It may be that collective farming of state owned and controlled tracts on a plan similar to the Russian scheme is to be the solution. Such a reorganization would of necessity involve far-reaching changes in the order of government and society. It may be the best arrangement, but to many persons this scheme seems not only undesirable but even repulsive to our American ideals.

Perhaps instead there will be a wide extension of cooperative farming and marketing on a scale almost beyond our comprehension—certainly beyond the present thinking of even our progressive farmers. This form of organization is conceived by the great leaders to capitalize the advantages of numerous other plans and to retain many, if not all of the valuable elements in the present system. It is important to note that this proposed solution, on which a beginning has been made, is a consciously conceived intelligent plan for the improvement of rural life. Any such project proposed by

the experts in rural social organization makes great demands on the broad field of rural education. In fact, it is only through education in the schools and elsewhere that such a program can be worked out.

Present thinking seems to indicate that agricultural development must be along the line of corporate, collective or cooperative farming. Each one of these three distinct types of possible organization requires a new and different type of leadership. If any of the present managing and controlling personnel remain after the change, it will be due to a remaking of attitudes, ideals and everyday practices of that personnel. Perhaps this new leadership in the industry may be developed out of the present younger generation of the rural population. If it is, it will be through the educational opportunities provided for our rural boys and girls, our rural young men and young women. Trainers of teachers must not wait for such opportunities to be demanded. As a general thing farm people do not appreciate or at least have not appreciated or used to advantage many of the services made available to them. Nor can we blame them for it. Their outlook is the reflection of the antiquated schooling which they at one time received. The exceptions to this are those who for a time went away to agricultural colleges or by some other contacts gained a different perspective.

Is it actually any wonder that agriculture is in a bad way? It is a generally recognized fact that the rural schools have been for years at the bottom of the educational ladder. The teachers there are the most inexperienced, the youngest, the poorest in point of preparation and are the most poorly paid. They have the least, the poorest and the oldest equipment to work with, the least supervision or professional stimulation and in most cases the most difficult piece of work to do. Here indeed is the greatest opportunity in the whole system of public education to make striking progress.

#### *Preparing for a New Social Order*

In this economic crisis the effects that inadequate schools have had in rural areas can be seen especially well. One can also visualize certain possible consequences if the situation is not rapidly and extensively improved. The dire need of the most serious professional consideration of rural teacher training requires an enlarged and progressively conceived plan. Nor can it be said that state supported teacher training institutions bear no responsibility in seeing to it that the old order is changed. The vicious circle of poor rural elementary schools, insufficiently educated rural children, inadequately trained teachers and more poor teaching must be broken.

To provide an enlightened leadership and intelligent followers for a new rural social order, schools with modern objectives are necessary. Although the criticisms of rural schools which have been made in preceding remarks are just, it still should be remembered that the small rural elementary school has striking advantages over schools of the usual city and large village type. The possibilities for cooperation and the practice of desirable social relationships, for individualized instruction and for the development of unprejudiced critical thinking, for introducing opportunities for personal experiences in the appreciation of art and music, for the remaking of children's health habits through a full day of personal contacts covering most of the phases of daily life, for building character on the "caught not taught" basis—these and other opportunities can be grasped by cultured, tactful, enlightened and well prepared teachers. A longer time for adapting teaching personalities in training, for it takes time, and a more careful selection of prospective rural teachers may eventually make of small rural schools what they should be.

#### *Why Not Rural Teaching as a Career?*

It has been pointed out in the first part of this article that as a result of the economic depression, longer tenure of teachers in the rural field may be expected. It therefore follows that if these improvements in instruction are to be obtained with teachers in service, normal schools and teachers' colleges must provide opportunities for growth through summer sessions, extension courses, visiting days, follow-up service and other arrangements. In this way or through active state or local supervision, teachers in service may catch the vision of progressive rural education. This will aid materially in bringing about a situation in which "rural teaching as a career" will be effective, attractive and profitable.

The desperate need of more adequately trained teachers in revitalized, progressively conceived rural schools has been indicated. The development of a new rural social order in the coming generation is imperative. With the strong evidences of renewed and increasing state support for the equalization of educational opportunity between the country and city, state teacher training institutions must assume in dynamic fashion the obligation of preparing better teachers for this program. The time seems right for a rapid advance. It is a challenge to those who are engaged in planning the policies and directing the services of state teacher training institutions. It is a great responsibility and at this time it is an even greater opportunity.<sup>1</sup>

<sup>1</sup>Read before the Department of Rural Education, National Education Association, at the meeting in Washington, D. C.

# Predicting College Success by High School Grades

*How best to inform parents of their children's chances for making good in college is the guidance worker's problem; the data presented in this study should aid materially in this task*

By RUTH BYRNS, University of Wisconsin

HOW accurately can college success or failure be predicted? Is it possible for the boy or girl who rates low in a standard psychological or college aptitude test and who gets low grades in high school to succeed in college work? Does the young man or woman of great aptitude always win the best grades in college? These questions are ever in the minds of today's school superintendents, principals and guidance workers.

Even when the school administrator or guidance official can answer these questions to his own satisfaction, there still remains for him the problem of how to impress the facts upon parents who have for their children ambitions that are not founded on ability or aptitude. Many difficult cases in guidance work also arise from the insistence of a high school pupil to go on to college when he has little or no chance for success. Occasionally, too, an extremely intelligent boy or girl is awed by the thoughts of college and lacks the confidence that his or her ability and achievement should give.

## *How Facts Should Be Presented*

One satisfactory method of solving these fundamental problems in educational guidance is to present objective evidence clearly and honestly to parents and to pupils and to urge them to give due weight and value to the facts in making their decisions. Difficulty is confronted here, however, because much of the research and many of the studies in this field are presented in technical terms and in statistical language that cannot be readily understood by the pupil or the average parent.

This difficulty can be met only by presenting facts concerning college achievement in a simple and objective manner. It is for this purpose that the following statistics have been prepared for the use of the high school guidance worker. The study is based on a detailed analysis of the ability, aptitude and achievement of freshman students in the University of Wisconsin during the year 1929-30.

The information concerning the ranking of the freshmen in their high school classes was supplied by the high school officials. The psychological rating was obtained from the results of the Ohio State University Psychological Tests given to all seniors in Wisconsin high schools during the spring of 1929. College achievement was figured on the basis of grade point averages which were worked out for all freshmen.

The study does not include any freshmen in the University of Wisconsin's experimental college or any students who were carrying a greatly reduced schedule of studies because of poor health or outside work.

Recognition of the relationship that exists between the quality of achievement in high school and in college work is one step toward constructive guidance. This relationship is illustrated in an analysis of 968 unselected college freshmen. The students were divided into four groups according to their position in the high school class. College grade averages for all the freshmen in the four groups were then computed. It was found that of the 968 freshmen:

402 were from the highest quarter of their high school class.

171 from this group were in the highest quarter of the freshman class at the end of the first semester.

145 were in the third highest quarter of the freshman class at the end of the first semester.

55 were in the second quarter of the freshman class at the end of the first semester.

31 were in the lowest quarter of the freshman class at the end of the first semester.

289 were from next to the highest quarter of their high school class.

51 from this group were in the highest quarter of the freshman class at the end of the first semester.

- 90 were in the third highest quarter of the freshman class at the end of the first semester.
- 65 were in the second quarter of the freshman class at the end of the first semester.
- 83 were in the lowest quarter of the freshman class at the end of the first semester.
- 177 were from the next to the lowest quarter of their high school class.
- 11 from this group were in the highest quarter of the freshman class at the end of the first semester.
- 41 were from the third highest quarter of the freshman class at the end of the first semester.
- 45 were in the second quarter of the freshman class at the end of the first semester.
- 80 were in the lowest quarter of the freshman class at the end of the first semester.
- Exactly 100 were from the lowest quarter of their high school class.
- Only 2, or 2 per cent of this group, were in the highest quarter of the freshman class at the end of the first semester.
- 13, or 13 per cent, were in the third high quarter of the freshman class at the end of the first semester.
- 28, or 28 per cent, were in the second highest quarter of the freshman class at the end of the first semester.
- 57, or 57 per cent, were in the lowest quarter of the freshman class at the end of the first semester.

These same facts were arranged in a different manner by grouping the freshmen according to their college achievement. The high school ranking for all students in the various groups was then investigated. It was found that of the 968 freshmen:

- 235 were in the highest quarter of the freshman class at the end of the first semester.
- 171 of this group were in the highest quarter of their high school class.
- 51 were in the third highest quarter of their high school class.
- 11 were in the second highest quarter of their high school class.
- 2 were in the lowest quarter of their high school class.
- 289 were in the next to the highest quarter of the freshman class at the end of the first semester.
- 145 of this group were in the highest group of their high school class.
- 90 were in the third high quarter of their high school class.

- 41 were in the second high quarter of their high school class.
- 13 were in the lowest third of their high school class.
- 193 were in the next to the lowest quarter of the freshman class at the end of the first semester.
- 55 of this group were from the highest quarter of their high school class.
- 65 were from the next to the highest quarter of their high school class.
- 45 were from the next to the lowest quarter of their high school class.
- 28 were from the lowest quarter of their high school class.
- 251 were in the lowest quarter of the freshman class at the end of the first semester.
- 31 of this group were in the highest quarter of their high school class.
- 83 were in the next to the highest quarter of their high school class.
- 80 were in the next to the lowest quarter of their high school class.
- 57 were in the lowest quarter of their high school class.

This comparison of high school and college achievement of the 968 freshmen shows that students who rank high in high school tend to rank high in college and that there is a decided tendency for students who rank low in their high school class to rank low in the freshman class in college. A considerable number of students who rank high in high school rank low in college while only a very few students who were below the high school class average reached the class average in college work. The guidance worker, therefore, can be more sure that a good average in school does not guarantee college success as surely as a low high school average guarantees college failure.

Knowledge of the relationship between rating on a valid and reliable psychological or college aptitude test and achievement in college is also of paramount importance in advising the high school pupil concerning the advisability of entering college. By comparing the scores on the Ohio State University Psychological Test with the grade point averages of 1,825 freshmen, facts were discovered concerning this relationship. It was found that of the 1,825 freshmen:

- 178 were in the lowest quarter of the scores received by all high school seniors in the state of Wisconsin.
- 51 per cent of these received grades which placed them in the lowest quarter of the freshman class at the closing of the first semester.

25 per cent were in the second low quarter of the freshman class.  
 17 per cent were in the third quarter of the freshman class.  
 7 per cent were in the highest quarter of the freshman class.  
 283 were in the next to the lowest quarter of the psychological test scores.  
 38 per cent of these were in the lowest quarter of the freshman class at the end of the first semester.  
 26 per cent were in the second low quarter of the freshman class.  
 19 per cent were in the third quarter of the freshman class.  
 13 per cent were in the highest quarter of the freshman class.  
 478 were in the third quarter of the psychological test scores.  
 26 per cent of these were in the lowest quarter of the freshman class at the end of the first semester.  
 29 per cent were in the second low quarter of the freshman class.  
 30 per cent were in the third quarter of the freshman class.  
 15 per cent were in the highest quarter of the freshman class.  
 886 were in the highest quarter of the psychological test scores.  
 11 per cent of these were in the lowest quarter of the freshman class at the end of the first semester.  
 19 per cent were in the second low quarter of the freshman class.  
 29 per cent were in the third quarter of the freshman class.  
 41 per cent were in the highest quarter of the freshman class.

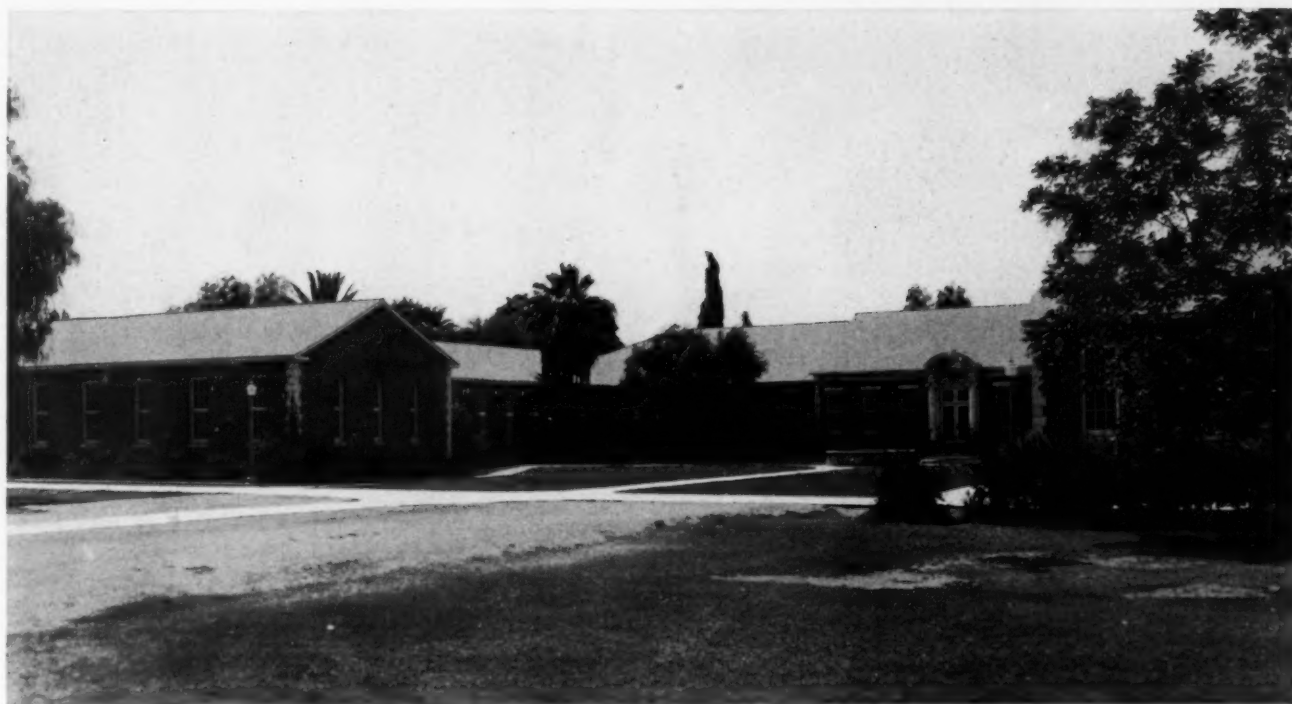
The same students were grouped according to the grades they received in the first semester of college. The psychological scores for all the students in the various groups were tabulated for the purpose of comparison. Of the 1,825 freshmen:

456 were in the upper quarter according to the first semester grades.  
 41 per cent of these were in the upper quarter of the statewide psychological test scores.  
 15 per cent were in the third high quarter of test scores.  
 13 per cent were in next to the lowest quarter of test scores.  
 7 per cent were in the lowest quarter of the test scores.  
 456 were in the next to the highest quarter according to the grades.

29 per cent of these were in the upper quarter of the test scores.  
 30 per cent were in the next to highest quarter of test scores.  
 19 per cent were in the next to lowest quarter of test scores.  
 17 per cent were in the lowest quarter of test scores.  
 456 were in the next to the lowest quarter according to the grades.  
 19 per cent of these were in the upper quarter of test scores.  
 29 per cent were in next to highest quarter of test scores.  
 26 per cent were in next to lowest quarter of test scores.  
 25 per cent were in the lowest quarter of the test scores.  
 Of the 456 in the lowest quarter of the freshman class according to grades:  
 11 per cent were in the upper quarter of the psychological test scores.  
 26 per cent were in the next highest quarter of the test scores.  
 38 per cent were in next to lowest quarter of the test scores.  
 51 per cent were in the lowest quarter of the test scores.

This comparison of college aptitude test scores with college achievement shows that students who rank high in the test tend to rank high in college achievement. Students who rank low on the standard psychological test tend definitely to rank low in college achievement. Only a small number of students who ranked low in the psychological test did satisfactory college work. A rather large proportion of the students who ranked high in the psychological test did not do satisfactory college work during their first semester at the university. Thus, a low score in the psychological test promises poor college work much more certainly than a high score promises success.

Suggestion is made to the high school guidance worker that he use this and all other available data to inform the prospective college student and his parents of what his chances are for doing satisfactory college work. The facts will in many cases prevent an individual with little college aptitude from entering on an experience where failure and defeat are almost certain. His ambitions may then be guided into fields within his capacity. The evidence may also stimulate students of high ability as it shows both their chance for success and for failure. Only that advice and guidance which are built on facts can be of genuine value to the individual and to the educational system.



## Where Arizona's Future Educators Are Taught to Teach

*The climate and topography of the Southwest were carefully considered in the planning of the training school at Tempe, Ariz., a building that offers a splendid example to other school districts*

By C. B. WIVEL, Superintendent, Tempe Elementary Grades, Tempe, Ariz.

**A**MONG the later types of school buildings in Arizona is the new training school for the Arizona State Teachers College, Tempe, Ariz.

In Tempe, an oasis in a vast desert land, the unique building that houses the training school stands as an example to other school districts of the state. Modern throughout, it provides a stimulus for far-seeing and progressive school boards who wish to keep their school structures up-to-date. In addition, it provides amply for the unusual needs of a training school plant.

In this U-shaped building are housed three distinct departments: the kindergarten-primary, the intermediate and the junior high school. There are fourteen classrooms to care for thirteen separate classes. Offices are provided for thirteen critic teachers. One extra room, which serves for activity purposes, is allotted to each of the three departments. Each grade uses one classroom and the

seventh grade has grown so that it now requires two rooms.

The middle section is occupied by the junior high school. The kindergarten-primary department uses the eastern section and the intermediate department uses the western section.

The rooms are purposely small so that student teachers will not be required to teach, at the most, classes of more than twenty-five pupils. At the close of the school year 1930-1931 the enrollment of 300 pupils practically absorbed the capacity of the plant. While it is the object of the training school to house its activities as nearly as possible in one plant, under conditions closely resembling those the student teachers will later meet in the field of teaching, it is still necessary for financial reasons to use the regular college rooms for instruction in manual training, mechanical drawing and typewriting. One room provides library facilities although these are limited in view of the pres-



*These fifth grade pupils are spending a happy and profitable hour in the library of the training school of the Arizona State Teachers College, Tempe.*

ent enrollment. The room used for an auditorium will eventually be equipped for a library and a larger auditorium will be erected as an extension of the plan.

No provision is made for a gymnasium since instruction in physical education may be given outdoors practically the year round in this land of sunshine. Ample playground space is near at hand on a five-acre field planted with Bermuda grass. Moreover, there are numerous places on the college campus of fifty-three acres where student teachers may take small groups for games and outside activities. In the heart of a beautiful campus where a wide variety of trees and shrubs grows in profusion the pupils of the training school enjoy rare opportunities for the activities common on a modern playground. A gymnasium would almost seem out of place in such a setting.

Classrooms are furnished with comfortable and carefully chosen seats. Natural slate, which is used throughout the classrooms, is installed at a tilting angle in order to eliminate glare. Indirect lighting fixtures are used further to reduce eye strain. The foundation of the building is concrete and the classroom floors are finished with maple flooring.

The outside walls are red range of rug brick laid

in English cross bond. Doors and windows are finished in white. Green asbestos shingles are used for roofing. The room now used as an auditorium is finished with open timber ceiling.

A. J. Keen, landscape artist, planned the layout of the shrubbery and trees that flank the structure on its front entrance. Here the lover of the beautiful may see an alluring bit of subtropical scenery that is typical of the Southwest. Standing near the eastern wing of the school is a large pepper tree, a familiar evergreen of this region. Its delicate foliage and long thin branches hang low as a frame on the eastern end of the campus setting for this school. On the west the frame is completed by young ash trees spreading over the front walk.

#### *Rich Foliage in Many Colors*

Standing near the eastern end of the lawn is a tall palm tree, a sentinel that thrives in this climate, while near it are the crooked limbs of an aged olive tree. Both were preserved as part of the campus scenery of many years ago. Around the arcade and walk of this U-shaped building is a rich foliage of varied colors, while towering above the roof to the south is a stately Italian cypress.

Among the shrubbery on the lawn are: Italian

cypress, golden arbor vitae, *Thuja pyramidalis*, *Evonymus japonicus*, *Pittosporum*, myrtle communis, guava, dwarf pomegranate, *Hakea*, *ligustrum*, *Callistemon rigidus* and oleander.

In summer the hardy Bermuda grass provides a thick carpet for the lawn; in winter Australian rye keeps the space fresh and green.

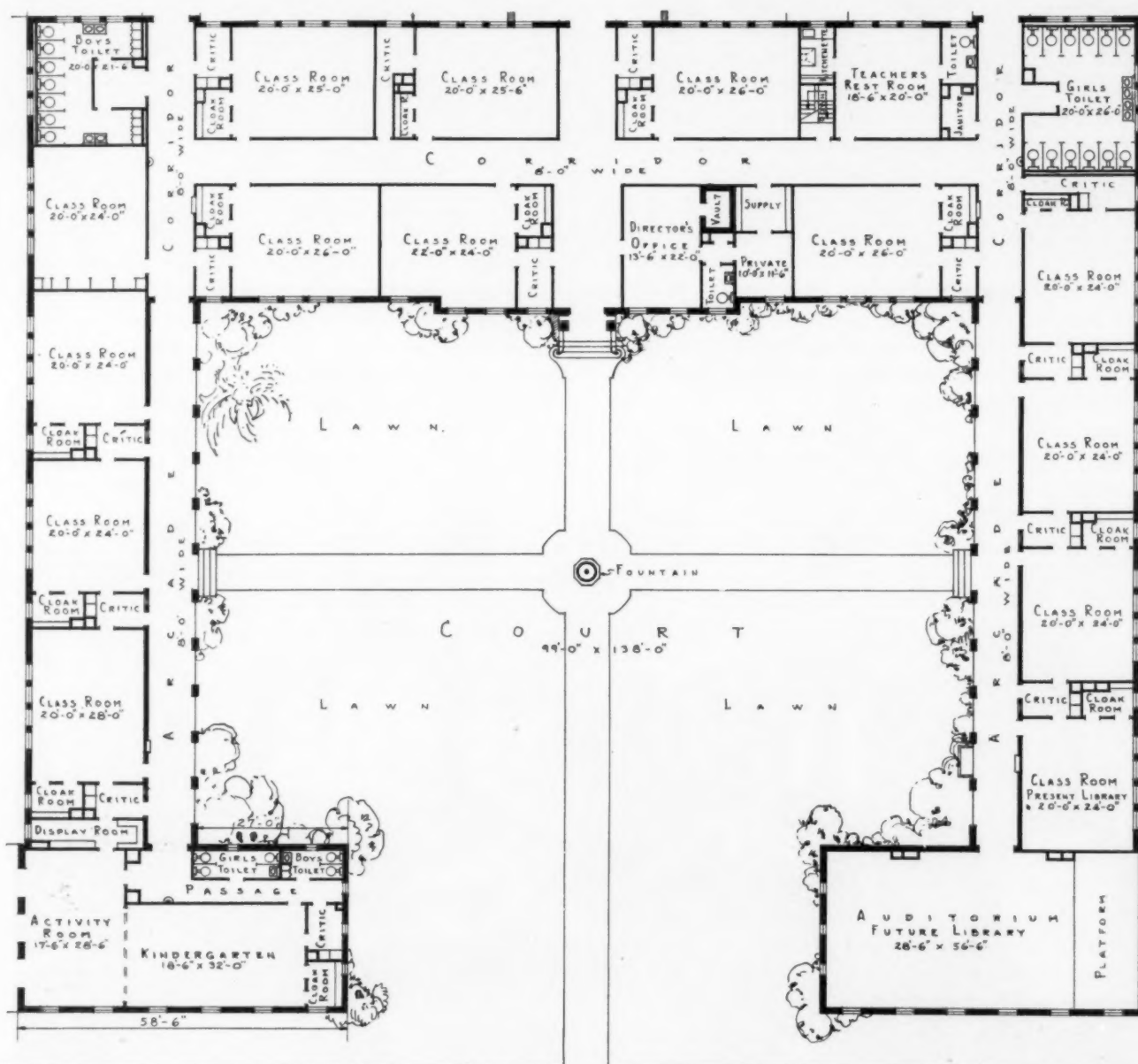
### How the Outer Office Is Equipped

The outer office for the director provides space for filing cabinets, a stenographer's desk and a conference table. Here is also the master electric clock. On one wall is the entrance to a vault for the use of the training school. There is also a telephone connected with the outside for the use of teachers and pupils. A lounge is placed along the

south wall and a built-in medicine cabinet is available for first aid purposes.

There is ample room for the six visitors' chairs kept there at all times and for more when they are needed during conferences. All office furniture is finished in oak. Near the stenographer's desk is a ready reference file that contains detailed personnel data about graduates and student teachers. This serves prospective employers, the school superintendents, with first-hand information about those whom they are considering for positions.

From the floor up to a panel, three and a half feet above, the wall is finished in a cream color. Above this panel it is tan, and the ceiling is white. This color plan is carried out in the rooms on the north side of the building, but on the south side



FLOOR PLAN-TRAINING SCHOOL-ARIZONA STATE TEACHERS COLLEGE-TEMPE, ARIZONA  
LESCHER & MAHONEY, ARCHITECTS-PHOENIX, ARIZONA

Age Group	Number of People
0	2
5	3
10	4
15	5
20	6
25	7

SCALE  $X_6'' = 1'-0''$

and in those rooms exposed to much sunlight the colors are changed. Here are found blue gray on the lower section, steel blue on the middle section and white with a blue tint at the top. Linen blinds are used on the windows of the director's offices; in the rooms with a sunny exposure Venetian blinds are used.

#### *Critics' Offices Are Accessible*

A short hallway connects the outer office with the director's private office. A door opens to a private lavatory from the hallway. In the director's office are a roll top desk and a medium sized table. This latter is used for ready reference texts that may be used during conferences with the critics and the student teachers. The director has an outside telephone connection on his desk and a private telephone leading to the critics' offices. Room telephones and clocks are part of an electric installation. The maple floor of these offices is varnished and rose colored rugs harmonize with the color scheme of the walls and ceilings.

A feature of the critics' offices is their accessibility. The critic has ready access to either of the rooms adjoining, where student teachers under his supervision may be busy with their classes, but there is also a private entrance from the outside. This enables the student teachers, who must call for numerous conferences during the day, to reach the critic without disturbing the class that is in session in the adjoining room.

Each critic has a flat top desk, a storage space for books and a quiet place for consultations. These

offices are strictly private in the true sense of the word for student teachers and pupils do not have to, and are not allowed to use them as passageways.

The general science room is supplied with two long tables the tops of which are covered with linoleum. Below the windows there is shelving with doors to enclose the apparatus and the specimens. The cork display boards and the cork bulletin boards provide ample space for the many displays that are used in the science work. Not having funds to purchase a science table, the manual training department built a suitable substitute. In it is a large sink, and there is a wide top for the equipment used in experiments. Connection is also made for a Bunsen burner.

In planning the building provision was made so that the present U type may be later extended to the H type. Floors throughout the hallways and passageways are of concrete. In the main section of the building the concrete is finished in natural color, and in the east and west branches the arcade floor extending in front of the rooms is painted a dark green.

#### *Fire Hazards Are Eliminated*

Sanitary drinking fountains are in the east and west halls. Lockers attached to the walls of the hallways in the main section take the place of cloakrooms and thus are in keeping with the strictly junior high school type of organization.

Outside the main office are large settees. A table is also provided for the representatives of book companies who may wish to display their exhibits



*Health measures are combined with learning and play in the kindergarten, where each day milk is served to the underweight children.*



*With officers from their own grade presiding, these eighth grade pupils are doing research reading for a course in social science.*

for teachers and student teachers. Large bulletin boards, finished in a blue gray color that harmonizes with the surrounding walls, are placed in the main hallway south of the director's office. There are also bulletin boards in the east and west corridors. At each end of the hallway of the main section are glass fire alarm boxes and hose reels easily available for emergencies. Fire hazards are practically eliminated so far as human life is concerned, for the doors on the east and west sections open on the arcades while in the main section there are exits in the middle of the building and at the east and west corners. Should the exit by doorway from any classroom be blocked, even the younger children could simply push open the windows and jump safely to the green turf outside.

#### *A Splendid Collection of Pictures*

A trophy case, now practically filled, stands at the eastern end of the main hallway. In the halls is a fine collection of large colored pictures—of patriots, of famous bits of Western landscape and of paintings by the masters.

The boys' lavatory occupies the southeast corner of the main section and the girls' lavatory is opposite it on the southwest corner. In the boys' lavatory are sections with seven seats and eight regu-

lation urinal stalls. Four washstands complete the equipment. Flush type valves are used on both the seats and the urinals. Black and white tiling is used on the floors of both lavatories with a waterproof baseboard extending up six inches on all walls. Six windows open directly on to the campus and assure a supply of fresh air at all times. An equal amount of space is used for the girls' section. In it are twelve seats. All compartments on the girls' side are equipped with swinging doors.

#### *Heating Plant Is Unique*

The heating plant is unique in that it is connected with the general heating system for all buildings on the college campus. Housed in a basement room is a plenum through which four steam pipes pass. These pipes carry steam directly from the central heating plant of the college. Four valves, easily accessible from the basement floor, allow the regular flow of steam into the plenum chamber. Here these coils heat the air that is sucked in by a large fan operated by an electric motor. Fresh air from outside is drawn in during the cold weather, heated and forced into the rooms. During the warm fall and spring months when afternoons grow warm in this climate, this same device serves as an effective ventilating system.

In the Southwest the low temperatures come in the early morning hours and it is then that much heat is needed. The unit in this training school will supply sufficient heat to make all rooms comfortable for schoolroom activities after not over a half hour of operation. As the day grows warmer one valve, then another, and still later a third valve, are shut off until finally one steam pipe is supplying all the needed warm air to the rooms. The extra load that these steam pipes impose on the central heating plant is negligible; in fact, the fuel bill for this building is not sufficiently large to cause it to be segregated from the fuel bill for the entire campus.

Pipes carrying the hot air to the rooms are enclosed in a corked tunnel. Supplementing the regular hot air system are steam pipes connected to regulation radiators in the outer office and in the director's private office. On Saturdays, Sundays and nights when the hot air system is not operating, these pipes supply steam heat to office workers. It is simply a matter of turning a radiator valve to obtain heat in these offices for steam is available at all times that the central plant is operating.

As a double precaution to absorb vibration and minimize noise, the motor that operates the fan is set in a composition of pitch and cork. As part of a safety program the motor and the belt are completely surrounded by a guard fence.

The following figures speak for themselves in showing that this state institution used every dollar of its appropriation to good advantage: general contract, \$69,837.50; plumbing contract, \$4,350; heating contract, \$5,204; total, \$79,427.50. The cubic foot cost was \$0.19 and the square foot cost was \$3.97.

## What One Educator Thinks About Homogeneous Grouping

The theory of homogeneous grouping has many fallacies, according to James R. McGaughy, professor of education, Teachers College, Columbia University, who made an address on the subject at the National Education Association meeting in Washington, D. C.

The plan of grouping of pupils homogeneously has been accepted on the basis of authority rather than on the basis of facts scientifically obtained through research and experimentation, he emphasizes.

"It is bad enough that the necessities of school organization require a somewhat artificial classification into grade groups on such bases as chronological age or number of years spent in school.

That we should go still further and divide each of these grade groups into sections on the basis of scores made by pupils on paper and pencil tests is most undesirable.

"Many a bright boy with a blind spot in the field of creative English has had his life made miserable because his teacher has thought he was loafing when this field of activity has been the order of the day. The teacher does not know that even these brightest children have highly specialized abilities—she has been taught that they are homogeneous, and expects each to achieve equally well in every field of activity.

"In the light of sound philosophy and of the facts as known at present the best solution seems to be that of dividing each grade group into random or heterogeneous sections, then to impress upon each teacher the fact that there will be a tremendous range of ability confronting her as each activity is taken up and to encourage her to make informal and temporary divisions of her classroom group according to the specific needs of the individual pupils. Under this plan the needs of the individual pupils can be met, yet there will be no labeling and stigmatizing of the kind inherent in homogeneous or ability grouping."

## "Pupil Contributions" Show Creative Activity in New York Schools

The May issue of *New York State Education* is rightly named the "Pupil Contribution" number. From every corner of the state, from every type of school came poems, stories, pictures, posters, friezes, tapestries, soap models, cartoons, health projects, arithmetic problems and jokes. A careful selection was made by the editors and the result is an amazing and delightful representation of pupil talent.

The first section is called, "With Our Young Artists," and includes photographs of colorful tapestries, effective and thought provoking cartoons, pen and ink sketches, paintings, charcoal drawings by first grade pupils, and poems and in all lengths, rhymes and meter; there are illustrated poems and even *vers libre*.

The young composers are represented in a special section, with words and music—music in sharps and flats and majors and minors.

The jokesters have a page to themselves, and the photographers have submitted a worth while exhibition. Coming in for their share of attention are also the young scientists and prose writers.

The newer education presupposes that every child is a potential creator. This issue of *New York State Education* proves it.

# Searching Out New Sources for School Support

*A fundamental revision of the existing tax system is imperative to equalize the tax burdens of those who pay for public education; suggestions for such a revision are set forth here*

By JOHN GUY FOWLKES, Professor of Education, and LE ROY PETERSON, Assistant in Education, University of Wisconsin

ONE of the most important dates in the history of education in the United States is 1647. It was in that year that Massachusetts passed the now famous "Old Deluder Satan Act." Under that law, any community when it reached "the number of fifty householders, shall then forthwith appoint one within their towne to teach all such children as shall resort to him to write and reade." And further, that a community when it reaches one hundred householders "shall set up a gramer schoole, the master thereof being able to instruct youth so farr as they may be fited for the university."

In the act of 1647, compulsory legislative action in regard to education in Massachusetts was realized. By the act towns were specifically directed to furnish education for their youth, and were subject to fine for failure to do so. This act with the law of 1642 in Massachusetts marks the origin of the present system of free schools in the United States. Support of these schools was left to the community. Parents sending their children might be required to pay fees to the schools, or a rate might be levied on all the householders of the community.

## *Early Schools Were Endowed*

Before this law was enacted, as well as for a long period afterward, many schools in the colonies were supported by some kind of endowment. The people of Europe, immigrating to America, brought with them the idea of endowed schools. They had seen how the monastic schools of Europe had been supported by income from lands owned by the monasteries. After the monasteries had been suppressed in England by Henry VIII, schools were endowed by the rulers, nobles and members of the wealthy class. From the Middle Ages, people had been accustomed to endowed schools, and with this idea the colonists came to America. Ac-

cordingly, school endowments appeared early in the colonies. For example, Edward Hopkins at his death in 1658 left a fund for the support of the grammar schools in New Haven, Conn., and another for the schools in Hadley, Mass. Many similar endowments were made, causing schools to spring up here and there in all parts of the colonies.

## *How the Tax Idea Developed*

It soon became evident that if schools were to be made available to all, methods other than endowments, rate bills and indirect taxation would be necessary. At first it was believed that the permanent funds would support all public schools. This dream was soon shattered, however, and it became evident that some other source of money for the support of schools must be found. By 1825, many of the thinking men of the country were thoroughly convinced that the only sound system of education must be one supported by general taxes. "The wealth of the state must educate the children of the state," became the motto of those seeking taxation for school support. By 1830 the fight for tax supported schools was being urged in all sections.

The course of the struggle was different in the various states, but Cubberley characterizes it as follows: (1) permission granted to communities so desiring to organize a school taxing district, and to tax for school support the property of those consenting and residing therein; (2) taxation of all property in the taxing districts permitted; (3) state aid to such districts, at first from the income from permanent endowment funds, and later from the proceeds of small state appropriations; (4) compulsory local taxation to supplement the state or county plan.

Generally, permissive legislation from the states was obtained first by the cities. With their new social problems caused by their rapid growth, they

TABLE II—DECILE DISTRIBUTION OF INCOME AND REAL ESTATE TAXES OF 11,553 TAXPAYERS IN MADISON, WIS., FOR 1927<sup>1</sup>

Occupations	Kind of Tax	Decile									
		1	2	3	4	5	6	7	8	9	10
Accountants	I <sup>2</sup>	-	-	\$1.53	\$3.44	\$7.00	\$11.42	\$16.40	\$25.40	\$33.20	\$128.00
	R <sup>3</sup>	-	-	-	-	-	-	103.00	146.00	192.00	518.00
Architects	I	-	-	1.45	4.27	7.33	10.60	13.76	18.60	39.60	167.00
	R	-	-	-	-	-	-	91.33	136.00	199.00	629.00
Barbers	I	-	-	-	.26	2.40	4.20	5.88	8.92	12.65	112.58
	R	-	-	-	-	-	-	29.75	94.00	185.50	381.00
Business Men	I	-	-	1.36	6.85	13.36	22.21	47.31	82.60	171.50	1424.08
	R	-	-	-	-	116.43	188.42	285.48	470.00	905.00	1593.33
Carpenters	I	-	-	-	-	-	-	2.66	5.03	12.01	144.00
	R	-	-	-	32.17	77.50	103.60	124.92	153.10	186.89	1438.00
Chemists	I	-	-	.90	3.34	5.64	9.72	13.14	20.40	34.95	1128.00
	R	-	-	-	-	-	-	-	136.00	191.50	1326.00
Clerks	I	-	.05	1.51	2.97	4.38	5.79	7.78	10.90	17.44	108.00
	R	-	-	-	-	-	-	-	45.00	154.64	697.00
Committee Members	I	-	-	3.90	9.20	13.00	16.20	30.10	39.40	49.40	104.00
	R	-	-	-	-	-	-	171.00	197.00	287.00	494.00
Contractors	I	-	-	-	2.00	11.00	24.00	41.50	80.00	77.00	2439.00
	R	-	-	-	-	105.00	150.00	325.00	544.00	896.50	1857.00
Dentists	I	-	-	.60	7.80	16.55	27.40	40.14	70.20	119.00	320.00
	R	-	-	-	-	120.00	168.33	198.00	247.00	399.00	563.00
Drivers	I	-	-	-	-	-	-	2.00	4.67	9.00	25.00
	R	-	-	-	-	-	3.23	52.22	98.75	127.69	667.00
Electricians	I	-	-	-	1.00	3.31	4.80	7.50	11.00	18.50	188.79
	R	-	-	-	-	-	-	95.00	126.67	202.50	2295.13
Engineers	I	-	-	3.00	5.69	8.39	12.57	17.00	29.40	48.00	4423.00
	R	-	-	-	-	82.00	120.00	160.83	215.00	1808.00	
Foremen	I	-	-	-	.15	1.91	4.33	7.04	12.13	19.20	121.00
	R	-	-	-	-	5.00	68.00	101.40	133.75	155.33	395.00
Grocers	I	-	-	-	-	4.04	8.58	15.53	28.80	68.70	365.00
	R	-	-	-	-	78.33	138.66	189.00	239.00	419.00	1528.00
Inspectors	I	-	-	-	2.80	4.50	8.32	10.80	16.20	26.20	77.00
	R	-	-	-	-	68.00	108.00	142.00	172.00	172.00	847.00
Insurance Agents	I	-	-	-	2.51	8.75	14.73	29.90	40.30	195.30	1498.00
	R	-	-	-	-	-	-	79.00	178.00	293.00	1119.00
Laborers	I	-	-	-	-	-	.67	2.28	4.63	8.12	232.00
	R	-	-	-	-	-	18.25	66.22	104.97	146.45	591.00
Lawyers	I	-	-	3.39	12.75	24.54	34.80	59.20	114.00	276.00	1686.00
	R	-	-	-	-	-	158.00	198.66	317.00	442.00	2054.00
Machinists	I	-	-	-	-	.80	3.03	5.62	8.13	11.95	94.00
	R	-	-	-	-	-	22.00	76.62	104.75	145.14	425.00
Masons	I	-	-	-	-	-	.87	6.45	10.51	25.30	315.00
	R	-	-	-	-	16.43	68.00	106.36	123.20	177.57	1234.00
Medical Assistants	I	-	-	-	-	-	2.40	4.77	6.07	9.10	13.00
	R	-	-	-	-	-	-	6.15	29.00	189.30	795.00
Ministers	I	-	-	-	-	6.50	11.83	21.50	34.00	48.25	109.00
	R	-	-	-	-	-	-	54.50	138.00	171.50	411.00
Nurses	I	-	.66	3.15	4.17	5.43	6.96	8.72	10.73	14.20	60.00
	R	-	-	-	-	-	-	-	-	-	823.00
Office Managers	I	-	-	1.68	7.45	13.23	19.12	28.86	50.67	140.33	3829.47
	R	-	-	-	-	-	105.11	164.73	229.75	339.40	4691.30
Painters	I	-	-	-	-	-	.84	2.77	5.60	9.93	43.00
	R	-	-	-	-	-	56.00	104.00	128.00	192.67	646.00
Peddlers	I	-	-	-	-	-	-	-	-	-	2.48
	R	-	-	-	58.00	80.00	86.00	114.00	166.00	228.00	250.00
Pharmacists	I	-	-	1.88	4.80	7.67	12.70	18.60	21.40	34.20	155.00
	R	-	-	-	-	-	-	-	151.00	311.00	969.00
Photographers	I	-	-	-	1.60	9.00	22.80	31.30	40.40	57.40	82.00
	R	-	-	-	-	-	-	103.00	162.00	401.20	576.00
Physicians	I	-	-	-	4.44	14.23	25.00	43.78	86.00	236.00	1210.00
	R	-	-	-	-	100.00	188.33	256.67	399.00	1498.00	
Plumbers	I	-	-	-	.35	2.61	6.95	10.28	15.28	19.54	173.00
	R	-	-	-	-	66.00	105.67	129.14	171.75	4326.00	
Police and Firemen	I	-	-	-	-	-	1.38	4.43	8.40	12.20	68.00
	R	-	-	-	-	47.50	86.67	113.79	134.18	195.00	1135.00
Printers	I	-	-	-	2.61	5.21	7.46	11.19	15.70	24.43	667.00
	R	-	-	-	-	-	22.00	98.78	124.17	173.83	1495.00
Professors (Asst.)	I	-	-	3.09	6.55	10.00	13.89	17.75	24.40	38.11	269.00
	R	-	-	-	-	-	-	-	106.67	175.14	449.00
Professors (Assoc. and Full)	I	4.38	20.50	31.84	44.66	56.90	70.66	89.44	120.00	312.50	2084.00
	R	-	-	-	100.00	171.66	197.27	238.33	300.00	361.66	2973.00
Railroad Employees	I	-	-	-	.72	2.91	5.14	8.14	11.45	16.13	339.00
	R	-	-	-	-	50.71	89.14	112.65	137.75	169.70	445.00
Salesmen	I	-	-	-	.83	3.68	6.64	10.77	16.24	27.44	267.00
	R	-	-	-	-	-	-	72.33	143.17	198.09	1187.00
Statisticians	I	.50	2.00	9.00	13.00	25.00	36.50	38.00	41.00	64.00	174.00
	R	-	-	-	-	-	-	145.00	155.00	185.00	230.00
Students	I	-	-	-	-	-	-	-	2.91	7.52	5138.00
	R	-	-	-	-	-	-	-	-	50.50	470.00
Tailors	I	-	-	-	-	-	2.00	3.88	6.00	8.75	106.00
	R	-	-	-	-	81.25	101.67	122.25	155.00	300.50	1105.00
Teachers	I	.92	4.38	6.81	9.00	11.23	13.51	16.44	20.88	28.38	294.00
	R	-	-	-	-	-	-	-	-	147.50	948.00
Technicians	I	-	.60	2.90	5.20	6.60	7.52	10.10	16.20	17.35	145.00
	R	-	-	-	-	-	-	-	-	163.50	270.00
Veterinarians	I	-	-	-	-	1.00	4.80	8.60	12.40	20.20	22.00
	R	-	-	-	-	105.00	124.00	143.00	152.00	293.90	1409.00

In reading this table it is apparent that of the accountants 30 per cent pay \$1.53 or less income tax and no real estate tax. It is also apparent that of this group 60 per cent pay no real estate tax.

<sup>1</sup>Income tax data from office of assessor of incomes, Madison, Wis., real estate tax data from city clerk's office, Madison.

<sup>2</sup>Income tax.

<sup>3</sup>Real estate tax.

could not wait for the slower rural sections of the state. They, therefore, organized their schools under special laws and later, when rural districts saw the advisability of doing the same, the city schools became incorporated with and under the general state system. "Thus, Providence began schools in 1800, and Newport in 1825, whereas the first Rhode Island general law was not enacted until 1828; the 'Free School Society' of New York was chartered by the legislature in 1805, and the first permanent state school law dates from 1812."<sup>1</sup> Under legislation passed in 1812 and 1818, Philadelphia was permitted to organize schools, although the Pennsylvania general law dates from 1834.<sup>2</sup> Maryland state laws were passed in 1826, but Baltimore had organized its schools in 1825 under special legislation; and Mobile organized its schools in 1826, although Alabama state laws were not passed until 1854.<sup>3</sup> Similar conditions prevailed in other states.

Although such legislation at the present time seems weak and ineffective, there was a long and hard struggle before it could be put into effect. The development of tax supported schools by and large involved a period of fifty years among the early formed states outside the New England area. The development of a system of tax supported schools in Ohio illustrates the story.<sup>4</sup>

- 1802. State admitted to the Union.
- 1806, 1816. Organization of schools permitted. Only means of support rents of school section lands and rate bills.
- 1821. All property of residents of districts made taxable for schools.
- 1825. Building of schoolhouses permitted; site must be donated.
- 1825. A county school tax of one-half mill required to be levied.
- 1827. State permanent school fund created.
- 1827. Building repairs limited to \$300, and two-thirds vote required to authorize this expenditure.
- 1829. Special organization and tax law enacted for Cincinnati.
- 1831. Nonresident property holders also made liable for district school taxes.
- 1834. Each parent sending his child to school must provide his quota of wood.
- 1836. County tax increased to 1½ mills.
- 1838. Purchase of a school site permitted. Majority vote for repairs reduced to one-half.
- 1838. First state school tax of one-half mill levied.
- 1853. Rate bill abolished and school made free.

<sup>1</sup>Cubberley, E. P., *Public Education in the United States*.

<sup>2</sup>Wickersham, J. P., *A History of Education in Pennsylvania*.

<sup>3</sup>Cubberley, E. P., *Op. cit.*

<sup>4</sup>Cubberley, E. P., *Op. cit.*

The story in other states was much the same as in Ohio. Because of this similarity, no mention is made of these states, except to note that the citizens were gradually educated to accept the principle of school support through public taxation.

The beginnings, then, of tax supported schools are found in New England where land endowments, local appropriations, rate bills, license taxes and local taxes had originated at an early date. These and other means were adopted by many

TABLE I—SOURCES OF STATE FUNDS IN WISCONSIN, 1929<sup>1</sup>

Kind of Tax	Amount	Per Cent
General Property	\$117,520,468	68.05
Special Property	12,030,079	6.96
Tax	3,641,280	2.10
Other Special Taxes <sup>2</sup>		
Licenses	\$11,653,428	6.75
Fuel	6,896,286	3.99
Ton Mile Tax	119,178	.07
Motor Vehicles	18,668,892	10.81
Inheritance Taxes	2,942,400	1.73
Income Taxes	17,883,196	10.35

<sup>1</sup>Data from Wisconsin Tax Commission. Bulletin No. 33, 1929.

<sup>2</sup>Occupational, telephone, and insurance taxes.

states, so that the sources of school revenue may be classified as follows: (1) appropriations, (2) rate bills, (3) local taxes on personal and real property, (4) bank taxes, (5) licenses and taxes on occupations and on commodities, (6) lotteries, (7) land grants, (8) gifts and banquets and (9) permanent funds.

There are three steps in the development of present day taxation for schools. The first is a local tax initiated by the inhabitants of the community. The second is the legalizing of such a tax by the state under a general law. The third and final step in the development of taxation is reached when the state compels the local units to tax themselves for the support of schools. Connecticut took this final step in 1700, New York in 1795, Maine in 1821 and Massachusetts in 1827.

The question which now confronts society, particularly professional educators, is "What has been the result of the present system of taxation, and what, if any, changes are needed?" The question can be answered only by an analysis of the present plan of taxation. Such an analysis with respect to Wisconsin will now be presented.

The first step essential in analyzing the existing tax is to determine how a state raises its money. Table I shows the distribution of state monies in Wisconsin in terms of the type of tax employed. It is interesting to note that in this state, which, in 1911, passed the first state income tax law, the property tax bears 75 per cent of the load. If such is the case in Wisconsin, what must be the situation in states where the income tax is nonexistent?

Table II shows a decile distribution of income

TABLE III—SUMMARY OF TAXES PAID BY GROUPS IN MADISON, WIS., FOR THE YEAR 1927, WITH CORRELATION BETWEEN INCOME TAX AND REAL ESTATE TAX<sup>1</sup>

Occupations	No. of Cases	Total real estate tax paid by group	Total personal property tax paid by group	Total property tax paid by group	Total income tax paid by group	Total tax paid by group	Correlation between income tax and real estate tax paid by group	
							r	P.E.
Accountants	98	\$ 5905.42	\$ 527.33	\$ 6432.75	1403.77	\$ 7836.52	+ .03	± .12
Architects	72	5320.60	491.91	5812.51	1097.05	6909.56	-.56	± .14
Barbers	127	6313.48	598.76	6912.24	721.10	7633.34	-.54	± .10
Business Men	527	70128.79	17706.50	87835.29	42555.33	130390.62	+ .19	± .04
Carpenters	449	41865.15	1681.46	43546.61	1623.24	45169.85	-.56	± .05
Chemists	57	4279.50	1792.47	6071.97	2114.55	8186.52	-.34	± .16
Clerks	1730	59173.18	4064.60	63237.78	12516.52	75754.30	-.81	± .03
Committee Members	23	2206.97	185.76	2392.73	625.48	3018.21	.0	± .24
Contractors	45	6092.56	805.49	6898.05	13278.35	20176.40	-.16	± .18
Dentists	72	9917.75	2037.30	11955.05	2788.18	14743.23	-.06	± .13
Drivers	330	14398.77	1321.53	15720.30	801.00	16521.30	-.77	± .07
Electricians	99	7520.25	611.22	8131.47	850.87	8982.34	-.40	± .12
Engineers	250	21437.64	1858.61	23296.25	13560.53	36856.78	-.09	± .07
Foremen	213	13115.01	965.51	14080.52	1566.19	15646.71	-.34	± .08
Grocers	171	16425.82	4005.49	20431.31	4651.95	25083.26	-.25	± .09
Inspectors	58	4078.58	278.40	4356.98	552.92	4909.90	-.25	± .15
Insurance Agents	117	10531.26	693.38	11224.64	8173.62	19398.26	+ .03	± .11
Laborers	1761	90219.91	5439.62	95659.53	5086.17	100745.70	-.75	± .03
Lawyers	108	17484.20	1557.90	19042.10	14665.52	33707.62	+ .06	± .11
Machinists	688	33508.08	2251.27	35759.35	3229.34	38988.69	-.59	± .04
Masons	157	12507.63	866.34	13373.97	1272.71	14646.68	-.48	± .09
Medical Assts	39	2505.83	180.05	2685.88	265.66	2951.54	-.57	± .17
Ministers	57	2931.51	341.84	3273.35	1118.56	4391.91	-.66	± .16
Nurses	88	1736.23	111.26	1847.49	654.80	2502.29	-.12	± .11
Office Mgrs.	766	92152.36	7869.16	100021.52	52113.52	152135.04	.0	± .04
Painters	102	6359.71	572.43	6932.14	304.69	7236.83	-.73	± .12
Peddlers	12	1068.56	38.27	1106.83	2.48	1109.31	-.56	± .31
Pharmacists	49	4133.66	332.16	4465.82	777.72	5243.54	-.06	± .16
Photographers	19	1956.30	201.58	2157.88	392.09	2549.97	-.22	± .26
Physicians	165	24148.03	3025.43	27173.46	11716.49	38889.95	+ .19	± .10
Plumbers	203	23110.48	2147.75	25258.23	2183.46	27441.69	-.28	± .08
Police and Firemen	135	12524.61	462.49	12987.10	502.71	13489.81	-.45	± .10
Printers	317	19669.86	1897.00	21566.86	5697.96	27264.82	-.25	± .06
Professors (Asst.)	314	13329.56	1220.56	14550.12	4963.22	19513.34	+ .19	± .06
Professors (Assoc. & Full)	225	43804.37	1371.39	45175.76	26939.82	72115.58	+ .34	± .07
Railroad Employees	403	27023.36	956.27	27979.63	3664.69	31644.32	-.25	± .5
Salesmen	761	50589.28	4182.13	54771.41	9089.53	63860.94	+ .34	± .03
Statisticians	15	968.66	83.30	1051.96	468.64	1520.60	+ .22	± .29
Students	239	3880.33	1279.77	5160.10	5680.39	10840.49	-.42	± .07
Tailors	65	8063.85	288.10	8351.95	249.06	15277.54	-.64	± .15
Teachers	395	11713.33	904.36	12617.69	6925.59	19543.28	+ .03	± .05
Technicians	23	581.57	23.01	604.58	326.96	931.54	-.30	± .22
Veterinarians	9	1952.21	99.98	2052.19	51.72	2103.91	+ .29	± .36
Total	11553	806634.21	77329.14	883963.35	267224.15	1151187.50		

<sup>1</sup>Income tax data from Office of Assessor of Incomes, Madison. Real Estate tax data: from City Clerk's Office, Madison.

TABLE IV—MEDIAN TAXES PAID BY GROUPS WITH PERCENTAGE OF EACH GROUP PAYING REAL ESTATE TAX ONLY, INCOME TAX ONLY AND BOTH INCOME AND REAL ESTATE TAX<sup>1</sup>

Occupations	No. of Cases	Median real estate tax paid	No. paying real estate tax only	Per cent paying real estate tax only	Median income tax paid	No. paying income tax only	Per cent paying income tax only	No. paying both taxes	Per cent paying both taxes	Per cent paying real estate tax	Per cent paying income tax
Accountants	85	-	8	9.4	\$ 10.91	51	60.0	26	30.6	40.0	90.6
Architects	59	-	5	8.4	10.00	33	55.9	21	35.7	44.1	91.6
Barbers	106	-	28	26.4	3.80	64	60.3	14	13.3	39.7	73.6
Business men	475	153.29	93	19.6	17.24	159	33.4	223	47.0	66.6	80.4
Carpenters	368	100.66	197	53.5	-	83	22.5	88	24.0	77.5	46.5
Chemists	45	-	3	6.6	9.90	30	66.6	12	26.8	33.4	93.4
Clerks	1582	-	172	11.0	5.07	1179	75.5	211	13.5	24.5	89.0
Committee Members	20	-	3	15.0	16.00	11	55.0	6	30.0	45.0	85.0
Contractors	36	120.00	8	22.2	22.00	11	30.5	17	47.3	69.5	77.8
Dentists	62	160.00	11	17.7	23.00	22	35.4	29	46.9	64.6	82.3
Drivers	219	36.95	107	48.8	.98	85	38.8	27	12.4	61.2	51.2
Electricians	79	-	19	24.0	4.33	41	51.8	19	24.2	48.2	76.0
Engineers	225	10.00	26	11.5	10.30	114	50.6	85	37.9	49.4	88.5
Foremen	187	52.25	57	30.4	3.25	79	42.2	51	27.4	57.8	69.6
Grocers	144	127.50	44	30.5	7.50	45	31.2	55	38.3	68.8	69.5
Inspectors	48	40.00	11	22.9	8.00	21	43.7	16	33.4	56.3	77.1
Insurance Agts	90	-	10	11.1	15.33	51	56.6	29	32.3	43.4	88.9
Laborers	136	23.75	572	42.8	1.05	595	44.5	169	12.7	55.5	57.2
Lawyers	88	140.00	8	9.0	34.00	36	40.9	44	50.1	59.1	91.0
Machinists	541	25.36	177	32.7	3.24	248	45.8	116	21.5	54.2	67.3
Masons	124	69.99	55	44.3	1.99	37	29.8	32	25.9	70.2	55.7
Medical Assts.	29	-	11	37.9	4.00	15	51.7	3	10.4	48.3	62.1
Ministers	44	-	10	22.7	12.50	26	59.1	8	18.2	40.9	77.3
Nurses	79	-	4	5.0	5.93	73	92.4	2	2.6	7.6	95.0
Office Mgrs.	663	48.12	105	15.8	17.15	310	46.7	248	37.5	53.3	84.2
Painters	76	70.00	31	40.7	1.50	28	36.8	17	22.5	63.2	59.3
Peddlers	8	90.00	7	87.5	-	-	-	1	12.5	100.0	12.5
Pharmacists	42	-	3	7.1	12.00	28	66.6	11	26.3	33.4	92.9
Photographers	14	-	1	7.1	24.00	7	50.0	6	42.9	50.0	92.9
Physicians	130	100.00	23	17.7	25.66	54	41.5	53	40.8	58.5	82.3
Plumbers	165	65.00	40	24.2	6.33	65	39.3	60	36.5	60.7	75.8
Police and Firemen	115	80.83	52	45.2	.88	37	32.1	26	22.7	67.9	54.8
Printers	269	-	55	20.4	7.08	136	50.5	78	29.1	49.5	79.6
Professors (Asst.)	269	-	21	7.8	12.53	194	72.1	54	20.1	27.9	92.2
Professors (Assoc. & Full)	218	180.83	12	5.5	58.57	80	36.7	126	57.8	63.3	94.5
Railway Employees	366	74.00	111	30.3	3.91	146	39.8	109	29.9	60.2	69.7
Salesmen	596	-	117	19.6	6.70	336	56.3	143	24.1	43.7	80.4
Statisticians	14	-	-	-	26.00	8	57.1	6	42.9	42.9	100.0
Students	90	-	25	27.7	3.71	61	67.7	4	4.6	32.3	72.3
Tailors	53	100.83	21	39.6	1.66	16	30.1	16	30.3	69.9	60.4
Teachers	383	-	17	4.4	9.69	317	82.7	49	12.9	17.3	95.6
Technicians	21	-	2	9.5	7.00	17	80.9	2	9.6	19.1	90.5
Veterinarians	8	110.00	3	37.5	2.00	3	37.5	2	25.0	62.5	62.5
Total	9551	0	2285	23.9	7.76	4952	51.8	2314	24.2	48.5	76.0

<sup>1</sup>Income tax data from office of Assessor of Incomes, Madison, Wisconsin. Real estate tax data from City Clerk's office, Madison.

and real estate taxes paid by 11,553 taxpayers in Madison, Wis., county seat of Dane County, for 1927, arranged according to forty-three occupational groups. In reading the table, it is apparent that, of the accountants, 30 per cent pay \$1.53 or less income tax and no real estate tax. It is also apparent that of this group 60 per cent pay no real estate tax.

This decile distribution table shows that approximately 50 per cent of all taxpayers pay a real estate tax. It shows also that about 75 per cent pay an income tax. Real estate supports approximately 62 per cent of the tax burden, while income supports only about 2 per cent, special and personal property and other special taxes bearing the remaining 36 per cent.

TABLE V—AVERAGE TAXES PAID FOR THE YEAR 1927  
(BY OCCUPATIONAL GROUPS)<sup>1</sup>

Occupations	Average real estate tax paid	Average personal property tax paid	Average Property tax paid	Average income tax paid	Average total tax paid
Accountants	\$ 60.25	\$5.38	\$ 65.63	\$ 14.32	\$ 79.95
Architects	73.89	6.83	80.72	15.24	95.96
Barbers	49.71	4.72	54.43	5.67	60.10
Business men	133.07	33.60	166.67	80.75	247.42
Carpenters	93.24	3.74	96.98	3.62	100.60
Chemists	75.08	31.44	106.52	37.10	143.62
Clerks	34.20	2.36	36.56	7.23	43.79
Committee Members	95.96	8.08	104.04	27.19	131.23
Contractors	135.39	17.89	153.28	295.08	448.36
Dentists	137.75	28.29	166.04	38.72	204.76
Drivers	45.63	4.00	47.63	2.43	50.06
Electricians	75.96	6.17	82.13	6.60	90.73
Engineers	85.75	7.43	93.18	54.25	147.43
Foremen	61.58	4.53	66.11	7.35	73.46
Grocers	96.05	23.43	119.48	27.20	146.68
Inspectors	70.32	4.80	75.12	9.53	84.65
Insurance agents	90.01	5.93	95.94	69.86	165.80
Laborers	51.23	3.09	54.32	2.89	57.21
Lawyers	161.89	14.43	176.32	135.79	312.11
Machinists and Mechanics	48.70	3.27	51.97	4.69	56.66
Masons	79.67	5.52	85.19	8.10	93.29
Medical Assts.	64.26	4.61	68.87	6.81	75.68
Ministers	51.43	6.00	57.43	19.62	77.05
Nurses	19.73	1.26	20.99	7.44	28.43
Office Managers	120.30	16.28	136.58	68.03	198.61
Painters	62.35	5.61	67.96	2.99	70.95
Peddlers	89.05	3.18	92.23	.21	92.44
Pharmacists	84.35	6.78	91.13	15.88	107.01
Photographers	102.96	10.61	113.57	20.63	134.20
Physicians	146.35	18.34	164.69	71.00	235.69
Plumbers	113.84	10.58	124.42	10.76	135.18
Police and Firemen	92.77	3.43	96.20	3.72	99.92
Printers	62.05	5.98	68.03	17.97	86.00
Professors (Asst.)	42.45	3.88	46.33	15.81	62.14
Professors (Assoc. and Full)	194.68	6.10	200.78	119.73	320.51
Railroad employees	67.06	2.37	69.43	9.09	78.52
Salesmen	66.48	5.50	71.98	11.94	83.92
Statisticians	64.57	5.55	70.12	31.25	101.37
Students	16.24	5.35	21.59	23.76	45.35
Tailors	124.06	4.43	128.49	3.83	132.32
Teachers	29.65	2.29	31.94	17.53	49.47
Technicians	25.28	1.00	26.28	14.22	40.50
Veterinarians	216.91	11.11	228.02	5.74	233.76

<sup>1</sup>Income tax data from Office of Assessor of Incomes, Madison. Real estate tax data from City Clerk's Office, Madison.

*This table is self-explanatory. Perhaps the most significant observation to be made is in the ranges in the amounts of the several types of taxes.*

A list of definitions of the occupations upon which Tables II, III, IV and V are based is given here.

Accountants—accountants, auditors.  
Architects—architects and draftsmen.  
Barbers—barbers, beauty parlor operators.  
Business men—those who own their business.  
Carpenters—including carpenter contractors.  
Chemists.  
Clerks—clerks, secretaries, stenographers, typists, bookkeepers.  
Committee members—political committees.  
Contractors—general contractors.  
Dentists.

Drivers—taxi, truck, teamsters.  
Electricians.  
Engineers—surveyors.  
Foremen—labor and shop foremen.  
Grocers—those owning their own groceries.  
Inspectors—pure food, bank, scales, measure.  
Insurance agents.  
Laborers.  
Lawyers.  
Machinists—mechanics.  
Masons and plasterers—including contractors.  
Medical assistants—orderlies, etc.  
Ministers.  
Nurses.

Office managers.  
 Painters.  
 Peddlers.  
 Pharmacists.  
 Photographers.  
 Physicians.  
 Plumbers—steam fitters and sheet metal workers, including contractors.  
 Police and firemen.  
 Printers—all those engaged in printing, from owner of shop to typesetter.  
 Professors—assistant and instructors.  
 Professors—associate and full professors.  
 Railway employees—all employees of the railroads and city railways.  
 Salesmen—except insurance salesmen.  
 Statisticians.  
 Students (university students).  
 Tailors.  
 Teachers—grade and high school teachers and administrators.  
 Technicians—includes technicians of various professions.  
 Veterinarians.

Table III is a summary of the total taxes paid by the various occupational groups and the correlation between income and the amount of taxes paid. On the whole the table is self-explanatory. If

TABLE VI—PER CENT REALIZED ANNUALLY ON INVESTMENTS IN RESIDENTIAL PROPERTY (PER CENT ANNUAL RENT IS OF TRUE VALUATION)<sup>1</sup>  
 (For the Years 1928, 1929 and 1930)

Per cent realized on investment	Number of cases
28 — 28.9	1
27 — 27.9	
26 — 26.9	
25 — 25.9	
24 — 24.9	
23 — 23.9	
22 — 22.9	1
21 — 21.9	
20 — 20.9	1
19 — 19.9	3
18 — 18.9	2
17 — 17.9	3
16 — 16.9	4
15 — 15.9	1
14 — 14.9	6
13 — 13.9	5
12 — 12.9	13
11 — 11.9	14
10 — 10.9	24
9 — 9.9	27
8 — 8.9	18
7 — 7.9	19
6 — 6.9	10
5 — 5.9	4
4 — 4.9	4
3 — 3.9	2
2 — 2.9	1
1 — 1.9	
0 — .9	
Total	163

Q<sub>1</sub> — 8.04%    Median — 9.87%    Q<sub>3</sub> — 11.95%  
 Mean — 9.74%    Range — 2.8% to 28.6%

<sup>1</sup>Data secured from Madison Real Estate Board.

TABLE VII—PER CENT OF ANNUAL RENT REQUIRED TO PAY TAXES OF RESIDENTIAL PROPERTY<sup>1</sup>  
 (For the Years 1928, 1929, and 1930)

Per cent of annual rent required to pay taxes	Number of cases
76 — 76.9	1
67 — 67.9	1
55 — 55.9	1
44 — 44.9	1
43 — 43.9	2
42 — 42.9	1
41 — 41.9	1
38 — 38.9	2
36 — 36.9	1
35 — 35.9	2
34 — 34.9	
33 — 33.9	2
32 — 32.9	3
31 — 31.9	1
30 — 30.9	3
29 — 29.9	5
28 — 28.9	5
27 — 27.9	6
26 — 26.9	12
25 — 25.9	3
24 — 24.9	6
23 — 23.9	11
22 — 22.9	10
21 — 21.9	16
20 — 20.9	7
19 — 19.9	7
18 — 18.9	7
17 — 17.9	9
16 — 16.9	6
15 — 15.9	7
14 — 14.9	6
13 — 13.9	3
12 — 12.9	4
11 — 11.9	4
10 — 10.9	5
9 — 9.9	1
8 — 8.9	
7 — 7.9	1
Total	163

Q<sub>1</sub> — 17.41%    Median — 21.90%    Q<sub>3</sub> — 26.78%  
 Mean — 21.56%    Range — 7.0% to 76.8%

<sup>1</sup>Data secured from Madison Real Estate Board.

the citizens who are paying most of the taxes are those having the ability to pay, there should be a high correlation between income taxes and property taxes. In determining this correlation, the bi-serial or tetra-choric *r* formula was used because of the nonlinear aspect of the data under consideration.

The coefficients of correlation varied from a  $-.81$  for clerks to a  $+.34$  for university professors and salesmen. Most of the coefficients were negative, the number that were positive being small. This shows clearly the lack of correlation between taxes paid and a measure of ability to pay. Where there were only a small number of cases in the group, correlations are not stated because of the lack of significance they would carry. The significance of the taxes paid by these groups is more clearly shown in Table IV.

Due to the crudeness of the results obtained by using the bi-serial *r* formula in Table III, another computation is presented in Table IV to substantiate the conclusions drawn from Table III. Table

TABLE VIII—PER CENT OF TOTAL NET INCOME OF 463 CORPORATIONS REQUIRED TO PAY TOTAL TAXES<sup>1</sup>  
(For the Year 1928)

Per cent of income required to pay total taxes	Number of cases
36,704	1
24,987	1
11,538	1
4,801	1
4,694	1
2,386	1
2,545	1
2,217	1
1,848	1
1,418	1
1,275	1
1,245	1
900 — 999	
800 — 899	1
700 — 799	1
600 — 699	3
500 — 599	3
400 — 499	2
300 — 399	8
250 — 299	4
200 — 249	11
175 — 199	4
170 — 174	
165 — 169	3
160 — 164	3
155 — 159	2
150 — 154	1
145 — 149	
140 — 144	
135 — 139	2
130 — 134	3
125 — 129	2
120 — 124	3
115 — 119	2
110 — 114	3
105 — 109	3
100 — 104	3
95 — 99	1
90 — 94	6
85 — 89	5
80 — 84	7
75 — 79	4
70 — 74	7
65 — 69	1
60 — 64	3
55 — 59	7
50 — 54	12
45 — 49	11
40 — 44	10
35 — 39	18
30 — 34	16
25 — 29	23
20 — 24	14
15 — 19	33
10 — 14	50
5 — 9	48
.001 — 4.99	108
Total	463

Q<sub>1</sub> — 5.83%    Median — 18.86%    Q<sub>3</sub> — 57.86%  
Mean — 41.13%    Range — .19% to 36,704

<sup>1</sup>Data from Wisconsin Tax Commission.

IV shows the percentages of the various occupational groups paying real estate taxes only, income tax only, and those paying both kinds, together with the median tax for each group.

On the average, 50 per cent of the citizens paying real estate taxes do not have sufficient income to pay any income tax. On the other hand, approximately two-thirds of those having tax paying ability (in the form of income) do not pay any real

estate tax (any of the 62 per cent of the tax burden).

Table V is a summary of the average taxes paid by the various occupational groups. This table is self-explanatory. Perhaps the most significant observation to be made is in the ranges of the amounts of the several types of taxes. They are as follows: Real estate taxes range from \$19.73 to \$216.91; personal property taxes range from \$1.00 to \$33.60; income taxes range from \$0.21 to \$295.08; total taxes range from \$28.43 to \$448.36.

#### *What a Study of Rental Values Showed*

To determine whether or not real estate owners were obtaining a fair return on their investments, a study of the rental values of 163 residential properties of Madison was made. The value of residential property as here used means the value of the real estate plus improvements on it. Twelve per cent gross is considered a fair return on an investment in residential property. Table VI shows that more than three-fourths of the residences do not yield a gross return of 12 per cent.

Whether or not 12 per cent gross profit on an investment in residential property is too much to expect would depend somewhat on the proportion of the rent that must be paid out in the form of taxes. Table VII shows the percentage of annual rent required to pay taxes on the 163 properties considered in Table VI.

A median of 21.9 per cent and a mean of 21.56 per cent of the annual rent was found necessary to pay the taxes. This means that, on the whole, it takes between one-fifth and one-fourth of the annual rent to pay the taxes. Surely, under such conditions the owner should be allowed 12 per cent gross on his investment. If not, the only conclusion that can be reached is that under the present system of taxation, real estate is unprofitable.

Still another method of showing how the existing system of taxation affects incomes derived from different sources is found in Bulletin No. 2, bureau of business and economic research, University of Wisconsin,<sup>1</sup> by Dr. Harold M. Groves. As illustrations, the following situations are used:

Suppose a man with a wife and two children lives in Madison, Wis. He owns apartment house property worth \$50,000, from which he derives an income of \$2,500 above all expenses. He has no other taxable property. In 1927, his taxes would have been:

Property tax	\$969.50
State income tax	6.50
Federal income tax	-----
Total tax	\$976.00

<sup>1</sup>Published July, 1930, pp. 5-8.

Suppose the taxpayer lived on a farm in the town of Verona (subdivision of Dane County). His income of \$2,500 above expenses is derived from farm property. If it is assumed that his capital yields 3.5 per cent return, he would have to own farm property worth \$71,414 in order to have an income of \$2,500. In 1927 his taxes would have been:

Property tax	\$987.19
State income tax	6.50
Federal income tax	-----
<b>Total tax</b>	<b>\$993.69</b>

Suppose the taxpayer is an owner-operator merchant in Madison, and his income is derived from both property and services. In order to receive \$2,500 net profit, he would own about \$10,000 worth of property (building and goods). His profit would consist of a combination of interest on his investment and salary for his services. In 1927, his taxes would have been:

Property tax	\$193.90
State income tax	\$6.50
Federal income tax	-----
<b>Total tax</b>	<b>\$200.40</b>

Suppose the taxpayer lives anywhere in Wisconsin. He owns bonds from which he derives an income of \$2,500. His taxes for 1927 would have been:

Property tax	-----
State income tax	\$6.50
Federal income tax	-----
<b>Total tax</b>	<b>\$6.50</b>

It is plain from the foregoing presentation that (1) at present in Madison, Wis., the property tax paid by the individual is bearing the major portion of the tax load; (2) there is little relation between current income and the total amount of taxes paid; (3) seventy-five per cent of the 163 residence owners studied are not deriving a gross profit of 12 per cent in terms of rental value, this being the sound figure for gross profit as determined by the Madison Real Estate Board; (4) the percentage of the annual rental value necessary to pay the property tax in Madison is between one-fifth and one-fourth of the gross annual rent.

#### *How the Tax System Affects Corporations*

The question of whether the present system of taxation affects corporations as it does individuals immediately arises. Table VIII shows the percentage of the total net income necessary to pay the total taxes of 463 corporations in Dane County. The range is from .19 per cent to 36,704 per cent,

with a median of 18.86 per cent and a mean of 41.13 per cent.

Table IX shows the percentage of the total net income necessary to pay the property taxes of the 463 corporations considered in Table VIII. It will be noticed that there are 118 corporations paying no property tax, and 345 corporations that do pay property tax. Two calculations were made in connection with this table, one using the 345 corporations paying property taxes, and the other including the 118 corporations which do not.

For the 345 corporations paying property taxes, a range of .11 per cent to 50,900 per cent of the income was required to pay property taxes. The median is 20.97 per cent, and the mean is 32.68 per cent. For the entire group of 463 corporations,

TABLE IX—PER CENT OF TOTAL NET INCOME OF 463 CORPORATIONS REQUIRED TO PAY PROPERTY TAX<sup>1</sup>  
(For the Year 1928)

<i>Per cent of income required to pay property taxes</i>	<i>Number of cases</i>
800 — over	14
700 — 799.99	1
600 — 699.99	4
500 — 599.99	2
475 — 499.99	
450 — 474.99	1
425 — 449.99	
400 — 424.99	1
375 — 399.99	1
350 — 374.99	1
325 — 349.99	1
300 — 324.99	3
275 — 299.99	2
250 — 274.99	1
225 — 249.99	4
200 — 224.99	5
175 — 199.99	4
150 — 174.99	7
125 — 149.99	7
100 — 124.99	11
95 — 99.99	3
90 — 94.99	5
85 — 89.99	2
80 — 84.99	6
75 — 79.99	4
70 — 74.99	4
65 — 69.99	
60 — 64.99	3
55 — 59.99	8
50 — 54.99	3
45 — 49.99	7
40 — 44.99	11
35 — 39.99	8
30 — 34.99	9
25 — 29.99	15
20 — 24.99	18
15 — 19.99	23
10 — 14.99	32
5 — 9.99	47
.001 — 4.99	67
0.0 —	118
<b>Total</b>	<b>463</b>

345 corporations paying property tax:	463 corporations having income, 118 of which pay no tax:
Q <sub>1</sub> — 7.05%	Q <sub>1</sub> — 0.0 %
Median — 20.97%	Median — 9.95%
Q <sub>3</sub> — 79.69%	Q <sub>3</sub> — 44.66%
Mean — 32.69%	Mean — 27.99%
Range—.11% to 50,900%	Range—0% to 50,900%

<sup>1</sup>Data from Wisconsin Tax Commission.

TABLE X—PER CENT OF INCOME REQUIRED TO PAY TAXES OF 118 CORPORATIONS HAVING INCOME BUT PAYING NO PROPERTY TAXES<sup>1</sup> (For the Year 1928)

Per cent of income required to pay taxes			Number of cases
137	—	137.9	1
112	—	112.9	1
85	—	85.9	1
84	—	84.9	1
81	—	81.9	1
50	—	51.9	1
35	—	35.9	1
20	—	20.9	1
17	—	17.9	1
16	—	16.9	1
15	—	15.9	1
14	—	14.9	
13	—	13.9	
12	—	12.9	
11	—	11.9	4
10	—	10.9	5
9	—	9.9	7
8	—	8.9	2
7	—	7.9	2
6	—	6.9	5
5	—	5.9	4
4	—	4.9	1
3	—	3.9	4
2	—	2.9	13
1	—	1.9	26
0	—	.9	34
Total			118

Q<sub>1</sub> — .84%    Median — 1.96%    Q<sub>3</sub> — 7.75%  
Mean — 14.79%    Range — .19% to 137%

<sup>1</sup>Data from Wisconsin Tax Commission.

the range is from 0 per cent to 50,900 per cent, the median is 9.95 per cent, and the mean is 27.99 per cent. The 118 corporations paying no property tax distort the picture a great deal.

When it is recalled that Table VIII showed that the median percentage required to pay all taxes was 18.86 per cent of the net income, Table IX indicates that property valuation is bearing the larger part of the tax burden among corporations as well as individuals in Dane County. A comparison of Tables VIII and IX with Table X makes even clearer the unfairness of the situation.

A comparison of Tables VIII and IX is most interesting. A median of 18.86 per cent of the income of corporations is necessary to pay the total taxes and a median of 20.97 per cent (for 345 corporations) of the income is necessary to pay the property tax. On the whole, this would seem to indicate that property is carrying the major burden of the taxes.

A study of the 118 corporations paying no property taxes (Table X) supports the foregoing statement. Here it was found that a median of only 1.96 per cent and a mean of 14.79 per cent of the income were necessary to pay the taxes. This table is somewhat misleading in that Wisconsin income taxes are based on the average of three years' earnings, and the fact that federal taxes are also included in the classification of total taxes paid. However, on the whole, it would seem that corpo-

rations owning no property have little of their income absorbed by taxes.

Table XI shows the taxes paid by 171 corporations having no net income. It is significant to note that more than half such corporations paid \$385 or more in taxes.

Thus with corporations, as well as with individuals, it is seen that at present taxes paid in Madison and Dane County as a whole bear little relation to current income. It is believed that these studies are indicative of the situation for the country as a whole.

Table XII is an analysis of the taxes paid by 1,120 farmers in Dane County in 1928. The story here is similar to those concerning the 11,553 individuals in Madison, and 463 corporations that have been presented previously. It is illuminating to note that of the 433 farmers who paid income taxes, 27.7 per cent had no net income from the farm. It is also significant to observe that practically all of them paid a property tax and that the average property tax was \$237.40.

It seems evident from the material that has been presented that a fundamental revision of the existing tax system must be made. However, a general revision cannot be considered apart from its connection with the support of public schools. Therefore, some general recommendations for the

TABLE XI—TAXES PAID BY 171 CORPORATIONS<sup>1</sup> HAVING NO NET INCOME<sup>2</sup> (For the Year 1928)

Amount of tax paid		Number of cases
\$5000	— over	6
4500	— 4999.99	3
4000	— 4499.99	1
3500	— 3999.99	3
3000	— 3499.99	6
2500	— 2999.99	1
2000	— 2499.99	6
1500	— 1999.99	7
1000	— 1499.99	11
900	— 999.99	5
800	— 899.99	4
700	— 799.99	7
600	— 699.99	5
500	— 599.99	12
450	— 499.99	3
400	— 449.99	4
350	— 399.99	5
300	— 349.99	4
250	— 299.99	8
200	— 249.99	6
175	— 199.99	2
150	— 174.99	4
125	— 149.99	4
100	— 124.99	4
75	— 99.99	9
50	— 74.99	6
25	— 49.99	8
0	— 24.99	27
Total		171

Q<sub>1</sub> — \$79.86    Median — \$385.00    Q<sub>3</sub> — \$1,056.82  
Mean — \$1,724.63    Range — 12c to \$71,896.00

<sup>1</sup>Data from Wisconsin Tax Commission.

<sup>2</sup>Eleven corporations having an income equal to their taxes, and 160 operating at a loss.

TABLE XII—AN ANALYSIS OF THE TAXES PAID BY 1,120 FARMERS IN DANE COUNTY, WISCONSIN, IN 1928  
Decile Distribution of Income and Property Taxes Paid in 1928

	1	2	3	4	5	6	7	8	9	10
I <sup>1</sup>	0	0	0	0	0	0	2.43	5.66	11.13	90.00
R <sup>2</sup>	36.11	125.32	162.32	190.70	215.23	244.83	282.20	335.63	433.75	1,500.00

	Number	Per cent
Number and per cent paying income tax	433	38.66
Number and per cent paying property tax	1110	99.10
Number and per cent paying property tax only	682	60.89
Number and per cent paying income tax only	5	.45
Number and per cent paying both income and property taxes	428	38.21
Number and per cent filing income returns paying neither income or property tax	5	.45
Correlation of property tax with income tax: + .19 with P. E. of $\pm .03$		
Of the 433 cases paying income tax 120 cases or 27.7% have no net income from the farm.		
Total Income Tax of Farmers	\$ 3,882.37	
Total Property Tax of Farmers	265,893.61	
Total Tax of Farmers	\$269,775.98	
Average Income Tax	\$ 3.47	
Average Property Tax	237.40	
Average Total Tax	\$240.87	
<sup>1</sup> Income Tax.		
<sup>2</sup> Real Estate Tax.		

modernization of the tax program in this country will be offered.

From Adams to Seligman, it has been generally conceded that any scheme of taxation should be founded on (a) need and (b) the ability to pay. However, the correct methods of determining need and the ability to pay have neither been definitely established nor universally accepted.

Need of money for both individuals and large social groups depends to a high degree upon the tastes, appetites, desires and attitudes of a people. In establishing a public school program, no one can accurately say what these appetites, attitudes and desires will be. It may be well in passing, however, to remark that in determining need, the value received per dollar spent must receive more attention in light of the increasingly larger sums demanded for public schools and the difficulty now experienced in raising money for the support of public education. Schools should be supported by a plan of taxation conforming to the two criteria given—need and the ability to pay.

Present ability to pay, for individuals and corporations alike, is best measured by income. It seems clear that the time has come for the formulation of a new plan of taxation. This new plan, it seems to us, must be based upon income from whatever source it may be derived. Income is derived in four ways: (1) from personal service; (2) from the use of capital; (3) from the sale of property, including sale of nonproductive property; (4) from inheritances and other gifts. The studies that have been presented have not included inheritance taxes, and

consequently no recommendations are offered concerning them.

Three major proposals are offered. They are:

1. That the income tax be utilized in all states and that the amount of money raised by the income tax be increased.

2. That capital holding, including both property and securities be transmuted into annual rental values and annual income values. This obviously calls for the taxation of dividends.

3. That the rate of taxation upon income derived from personal service and the sale of property be lower than the rate of taxation on income derived from use of capital—property and securities.

It is evident that property owners at present are bearing an unjust share of the tax burden. It seems equitable, therefore, that property owners be relieved of part of the existing tax load. Of course, a shift to this scheme cannot be made overnight. As an initial step in the adoption of the principles recommended, it is suggested that in states not having an income tax, concerted action be taken toward the enactment of the income tax law. In those states already utilizing an income tax, as previously stated, it is recommended that the amount of money raised by the taxation of income be increased. It is further recommended that instead of requiring an assessment of the valuation of property local real estate boards shall determine and report the annual rental value. The procedure would then be one by which this annual rent value would be added to the income of the owner. The rate of tax on the annual rental value would be

higher than the rate of tax on income gained by personal service.

Four main arguments are usually offered in opposition to the taxing of intangibles. They are as follows:

1. Intangibles cannot be taxed. The tax on intangibles is evaded and causes a disregard for other forms of taxation.

2. A tax on intangibles is double taxation, which is undesirable.

3. A tax on intangibles will be shifted to the debtor—the person owning the intangibles will go tax free.

4. The cost of administration of an intangible tax law would be excessive.

It is our belief that the objections to the taxation of intangibles can be refuted and a satisfactory system be inaugurated. The first objection can be eliminated by requiring the registration of intangibles. The large number of registered bonds is an indication that this could be done. A nonregistered stock or bond would be of no value. By this method it can be seen that intangibles can be taxed.

The objection to the taxation of intangibles on the basis of double taxation is hardly sound. If double taxation causes a person with tax paying ability to pay taxes he did not pay before, there can be no objection. Surely no one can say that a person having an income from intangibles is less able to pay than a person with a like income from some other form of property.

This naturally leads to the third objection. Would the owner of intangible property shift the taxes he should pay to the debtor? To argue that intangibles should be tax exempt because the tax will be shifted is equivalent to saying that the owners of farms should not be taxed because they will shift the tax to the renter, or that the business enterprise should not be taxed on its goods because the tax would be shifted to the consumer.

#### *A Challenging Problem*

With respect to the cost of administering successfully a tax on intangibles, little has been done. Any estimation of the cost must be a pure guess, but it is fair to believe that the cost of administration should be less than that of administering the income tax.

Under present conditions, it is difficult to ascertain the amount of money invested in intangibles in the United States. One or two examples, however, will be suggestive of the amount. In 1928, the amount of corporate bank stocks issued was \$7,753,040,281. In the same year, the amount of railroad stock outstanding was \$9,843,309,365.

This discussion has plainly been one concerning the fundamental problem of general taxation. This

may seem fallacious since the title of the paper is "Searching Out New Sources for School Support." Expenditures for public schools now equal from 35 per cent to 50 per cent of all money raised by taxation. Such being the case, it is our conviction that new sources of school support cannot and should not be attacked save in connection with the basic problem of governmental support. Professional educators lay claim to increased progressiveness in methods of teaching. Dare we fail in being equally progressive in our financial policies?<sup>1</sup>

## How Baltimore Keeps Its Schools Clean in Rainy Weather

The school board of Baltimore has solved the problem of keeping its school buildings reasonably clean during inclement weather.

To provide a place for children to play when the ground is muddy, the board follows a policy of paving approximately ten square feet of yard area for each child in school. During wet weather, children are permitted to play only on the concrete paved portion, and no mud or sand or cinders can be tracked into the corridors and classrooms of the school.

These paved school yards are laid out to accommodate many groups of children playing various games. There are courts marked out for basket ball, volley ball, dodge ball, hop scotch and several other games. The playgrounds have proved immensely popular with the youngsters, and the entire area of every school yard is occupied by groups at play before and after school and during recess periods.

## How Valuable Is the High School Library?

Of what value is the high school library?

An article in the *North Carolina Teacher* points out the following benefits: The library gives instruction, supplements classroom work for bright pupils, gives training in finding material, provides training in citizenship and character, offers a wise use of leisure time, provides advisement and guidance, relieves problems of discipline in the study hall and develops leadership.

"It is practically impossible to have a good school without a library," declares the article.

<sup>1</sup>Paper read by John Guy Fowlkes before the American Educational Research Association, Washington, D. C., February, 1932.

Grateful acknowledgment is made to the research committee, University of Wisconsin, for funds granted for making this study, during the years 1929-30, 1930-31 and 1931-32.

# Vital Points in Planning Publicity

*Current literature on school publicity points to the fact that a carefully chosen "educational interpretation" program increases public confidence in the schools*

By OSMAN R. HULL, Professor of School Administration, University of Southern California,  
and ARTHUR F. COREY, Superintendent of Schools, Buena Park, Calif.

THE field that school men until recently have been content to call "educational publicity," is rapidly gaining a dignity of purpose that entitles it to be rechristened "educational interpretation." Judging from the terminology used in recent articles and books, the idea has been firmly established that information to the public about schools should be carefully organized and interpreted. The word "publicity" has acquired an odium in the public mind because it suggests undesirable propaganda. "Interpretation" suggests telling the people what education is doing and why it is being done, and trusting that when the facts are known support will be guaranteed.

This study must necessarily omit many articles that have dealt with this subject. The material that has appeared in educational publications has been carefully reviewed, and the chief contributions are set forth in the following discussion.

## *Skillful Interpretation Is Essential*

The advantages of a program of educational interpretation are obvious. "Advance in education literally waits on the interpreter. Too many forward steps in education are not attempted because the parents would not understand them."<sup>1</sup> Glenn Frank, president, University of Wisconsin, recently said, "The future of America is in the hands of two men, the investigator and the interpreter. I raise a recruiting cry for the interpreter." Proper educational interpretation will show the public that education is an investment and not a cost.<sup>2</sup> Another point of view expressed is that it is the right of the public to know all the facts about its schools and the duty of school men to supply these facts.<sup>3,4</sup> Good publicity will substantiate the confidence of the people in their schools,<sup>2,5</sup> and will forestall much public criticism of the schools that comes from ignorance.<sup>6</sup> The net result of such a program is to guarantee public support of the schools when it is needed.

The materials of publicity are here organized

according to a suggestion found in an interesting article by E. J. Coltrane in the *High School Journal* for January, 1930. All publicity materials are classified in three groups—printed material, exhibits of activities and public and private discussions of school issues.

The most common and accepted means of educational interpretation is the newspaper. This means of getting facts before the public is the most obvious form of printed publicity for any purpose. The school is no exception. Other phases of newspaper publicity will be discussed in other parts of this article.

After the public press, the most popular and fertile medium of presenting facts is the school paper. Even many elementary schools are now printing and distributing news sheets to the pupils and parents of their districts. Any school paper should be continuous, factual, simple and inexpensive. It should not contain advertising. It should have some illustrations and a wide circulation. In order that these qualifications may be fulfilled there must be available good printing facilities and a conscientious and sympathetic adviser.<sup>7</sup>

The school annual has also been made a real reflection of the activity of the school, instead of a record of its athletic achievements. Every expensive school annual is an opportunity to send out judiciously in an attractive form excellent educational interpretation.<sup>8,9,10</sup>

## *Winning the Parents' Interest*

Many larger school systems, and even some smaller ones, are printing what is technically called a house organ. This is simply a small magazine printed by school authorities or by teachers' clubs, which seeks to interpret to the public the activities of education.<sup>11</sup>

Printed programs for school plays and entertainments offer a unique opportunity to get a message across to school patrons. The auditorium

is usually well filled long before the curtain goes up, and if the program is attractively printed it may contain along with the mere facts of the entertainment the story of the many educational activities behind the production. Many persons who would not stop to read such information at any other time may be reached in this manner. Such printed programs are sometimes elaborate in order to impress the patrons with the importance of the educational message.<sup>12, 13</sup>

Other means of interpreting education and its methods and objectives include the use of billboards, street car signs, letters to parents from teachers, principals or superintendents, printed courses of study, pupil handbooks, reports of surveys and superintendents' annual reports. One school system makes a regular practice of enclosing with every report card a short, vital message to the parents.<sup>12, 14</sup>

The general school exhibit held once or twice each year has long been used as a means of arousing the interest of pupils and of showing to parents the activities of education. A more recent development of the same idea is to have the schools in session at a special time when parents are free to visit them and to learn of the actual methods used in instruction. Demonstrations of teaching methods with actual classes are also used as program features for parent-teacher associations, service clubs and other public gatherings.<sup>15, 16</sup> One ingenious educator placed an entire class, with the teacher and all classroom equipment, in a large downtown store window and proceeded with school as usual for several days. Consequently, a great many people in that city visited school for the first time in many years.<sup>16</sup> Commencement exercises, if properly planned, can be made an unusually fine medium for disseminating desirable ideals and fostering a general respect for the value of an education.<sup>15</sup>

#### *Radio and Rotary as Publicity Mediums*

The advent of the radio and the popularity of luncheon clubs have done much to increase the possibilities for public discussion of school issues. The radio is fast gaining ground as a medium of general education. Educators who are wide-awake are taking this modern means of reaching the public. Luncheon clubs are also demanding discussions of school problems by school authorities. The school superintendent has a splendid opportunity to interpret the schools to the public through the medium of the service clubs.<sup>17</sup> Meetings of these clubs may be utilized for affording the members contact with the best scholars in the school, the debaters and public speakers and the commercial departments, as well as the athletes. These clubs

may be utilized in conducting surveys of what the schools are doing or what they should do. The superintendent may seize the opportunity to open his books to the citizens and inform them regarding school finance, pleading for equalization of educational opportunity for all and demonstrating the danger of crippling the schools by curtailing salaries. He may enlist the active cooperation of the members by inducing them to act as big brothers, advisers, or leaders of extraclass activities.<sup>18</sup> Training and practice in public speaking for school administrators are increasingly important.<sup>19, 20</sup>

#### *What Newspapers Print About Schools*

Many educators have been interested in knowing the relative amount of space devoted by newspapers to different phases of school activity and interpretation. Belmont Farley answers this question in his comprehensive study of "School Publicity in Newspapers."<sup>21</sup> Wegner found an astonishing similarity to Farley's findings in a relatively small and isolated situation.<sup>22</sup>

The following figures show the approximate distribution of space:

	<i>Farley, Per Cent</i>	<i>Wegner, Per Cent</i>
Extracurricular activities	47	48
Teachers and school officers	9	3
P. T. A.	7	3
Pupil progress	7	10
Buildings	4	2
Finances	5	3
Health	3	3
Curriculum	5	2
All other items	13	26

Paul A. Hedlund made an exhaustive study of the content of school articles in the public press of the state of Minnesota during the years 1925 and 1929.<sup>23</sup> By scanning the situation after a five-year interval he wished, if possible, to establish some general trends in the content of such material. He found that in the five-year period the amount of newspaper space given to schools had doubled, but he was disappointed to discover that the relation between extracurricular activity and real pupil schoolroom activity and worth while interpretation remained in both years approximately the same as that found by Farley and Wegner. John Guy Fowlkes made a survey of newspaper material in the state of Wisconsin, but with a different purpose in mind.<sup>24</sup> The material was classified as to value and then arranged by months into a calendar which any educator might follow in arranging his own newspaper publicity program for the school year. This calendar is complete and shows in detail the type of publicity

articles suited to each month of the school year. Fowlkes also mentions the high percentage of football and other extracurricular news.

Farley has interested himself not only in what the newspapers print about the schools, but also in what the people would like to have them print.<sup>25</sup> Gathering information from people in all parts of the country and from all walks of life, he has concluded that the interests of school patrons and of the public at large are, in order of importance, pupil progress, instructional method, pupil health, course of study, value of an education. He has also concluded that the further a function is from the actual child the less will be the public interest, and that this is true in all parts of the country and among those of all occupations.

The most interesting part of the whole situation is the fact that all investigators have found that the actual content of news does not correlate with the expressed interests of the public. Calvin Ryan, in *The NATION'S SCHOOLS* for December, 1930, reiterates the findings of Farley and suggests how they may be helpful to school officials in handling their publicity problems.<sup>26</sup> One writer assumes that public interest runs the whole gamut of possible educational information with equal facility and therefore catalogues the complete category of possible fields of educational thought and expresses the opinion that the public is interested in the whole business.<sup>27</sup>

Arthur B. Moehlman has emphasized the need for a thorough knowledge of the social factors operating in any community before a program of educational interpretation is attempted.<sup>28</sup> He believes that every program seeking to instill ideals in large numbers of persons must take into account the type of social life they live. He suggests that a comprehensive social survey be made in which certain specific factors should be determined. Among them he lists racial composition, family conditions, economic life, ethical life, community life, leisure activity, history of past community efforts and analysis of social conflicts.

#### *Transforming Educators Into Reporters*

Many school men have a hostile attitude toward the press. They take the position that a reporter is an intruder and treat him as such.<sup>29, 30</sup> They expect articles they hand to the press to be printed word for word and, being uninformed as to the problems of editing and printing, cannot understand why the story is not printed exactly as it is written. School men do not know how to write news. The average school man wants to write a news story with the most important point at or near the end. The editor has room for only three inches instead of four and the important ending is cut. The school

man cannot understand the result.<sup>31, 32, 33</sup> Only the most friendly cooperation with the press will put a school administrator in a position to direct his school publicity. The newspapers of a community can do much to hinder an educational program if they feel that those in charge of the administration of such a program are not in sympathy with them.<sup>31</sup> Nothing will help a school man so much in obtaining the whole-hearted support of the press as to learn to write a good news story.

#### *Rules That Govern Good News Stories*

Adherence to the following simple rules given by J. Erle Grinnell will help in producing good newspaper stories:

1. The information must be accurate.
2. The article must be brief but must give all the facts.
3. The first paragraph must answer the questions, Who? What? When? Where? and if possible Why? and How?
4. The details must be arranged in the order of importance so that if the article is cut to fit a certain space the essential elements will still remain.
5. Use short and clear sentences. Write news not literature.
6. Names should be used when possible.
7. School men must write with the public and not educators in mind.
8. A striking headline should be used. It may not be printed but the essential idea will be used.
9. No personal opinion should be expressed in a news article.
10. The value of news depends on its recency.
11. Use a typewriter.

There is great variation in the attitude toward educational interpretation. There are always those who feel that the less said the better. They believe in a "cover up" policy, and they are continually afraid someone will find them out. Then there are many school administrators who feel that the public should be told only the desirable facts. "Cover up the weaknesses and play up the strong points" is their motto. This might be called the "partial fact" type of interpretation. The third attitude is that which agrees that the public is entitled to all the facts about its schools and proceeds to hand out these facts without any attempt to organize and interpret them. The progressive school administrator will give his people the facts, but at the same time he will carefully organize and interpret them.<sup>34</sup>

After a proper attitude toward the problem is decided upon, the question then arises as to how much time, energy and space shall be given to publicity. This question seems best answered by saying that the amount of publicity is not so important

as its character and its quality. It should undoubtedly be given regularly and continuously rather than spasmodically, to arouse the public to respond to a special urgent crisis. So-called "publicity campaigns" are likely to act as boomerangs and come back upon the heads of their originators.<sup>35</sup>

Educators have not stressed enough the necessity for the instruction of the regular classroom teacher in the fundamentals of educational interpretation. One of the best means of real interpretation is to work through the pupils and so instill in them the ideals of our educational system that when they become parents the problem will be lessened. Teachers have the opportunity to perform this work every day as they teach. The parent-teacher association offers an admirable opportunity for the capable teacher to interpret education to the parents. This opportunity is not taken seriously enough by most teachers. Probably the most productive medium of interpretation for the average teacher is through her varied social contacts.

If educators, in all their social, religious and fraternal connections, would at every opportunity seek to uphold the dignity of education and to interpret its methods and objectives, the cumulative influence of such activity would be unbelievably effective.<sup>36</sup>

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## Why the Supply of Teachers Exceeds the Demand

Causes for the oversupply of qualified teachers in virtually every major field of teaching are outlined by Earl W. Anderson, bureau of educational research, Ohio State University, Columbus, Ohio, as follows: (1) reduction in public school and college personnel due to decreased budgets; (2) a return into teaching of many former teachers who had lost their positions in industry, commerce or other nonteaching occupations; (3) a rapid increase in the number of recent college graduates who qualified for teaching, due to lack of opportunity in their chosen lines; (4) no substantial reduction in the output of teacher training institutions; (5) a decrease in teacher turnover due to lack of opportunity in other lines, and to the temporary relative advantage of teaching over other occupations.

Approximately half of the college graduates of 1931 trained for high school teaching positions obtained employment as teachers in various schools.

Reports of ninety teachers' training institutions made to J. G. Umstattd, University of Minnesota, indicate that on the average the proportion of the graduates placed was as follows: two-year elementary course, 61 per cent; four-year elementary course, 68 per cent; high school academic courses, 42 per cent; special fields, from 53 to 75 per cent; master's degrees, 69 per cent; doctor's degrees, 71 per cent.

## What an Efficient Custodian Means to the School

The variety and importance of the school custodian's duties have increased to such a degree that he must be considered as an intelligent and responsible school officer, writes Ellis G. Rhode in a recent issue of the *California School Employees Journal*.

Not only must he be technically qualified to operate and care for expensive machinery and equipment, but he must also have the skill and knowledge to be the efficient manager of a modern school building.

Five functions of the custodian show the importance of his relation to the school and its management. The custodian (1) safeguards school property; (2) sets housekeeping standards; (3) sets moral tone; (4) has large control over health conditions; (5) has an important relation to fire hazards and safety.



## Special Services—The Cafeteria's Duty and Opportunity

*These services may include feeding the undernourished, the tuberculous, the crippled and the indigent child, as well as providing banquets for various school groups and even planning school picnics*

By HOWARD L. BRIGGS, Director of Vocational Education, and CONSTANCE C. HART, Supervisor of Lunchrooms, Board of Education, Cleveland

**A** NOTED food expert writes, "Life for many undisciplined children is one unbroken series of dissipations."

Most cases of malnutrition are caused by ignorance, poverty, lack of discipline, disease or physical defects. One individual has stated that 85 per cent of all malnutrition in children is due to a failure of parental control. The accuracy of this statement may be questioned, but it is evident that an intelligent direction of child feeding is a vital factor in preparing the child for a healthy adult life. Part of this responsibility must be assumed by the schools, not only in regard to the immediate feeding of the child, but as a matter of education in helping him to discriminate intelligently in selecting food when he is not directly under expert guidance.

The procedure for feeding elementary school children varies in different cities. Where the elementary school is organized on the eight grade basis, many systems have installed cafeterias which operate similarly to those described in previous articles wherein the problem is one of serving the average adolescent pupil. In systems in which the first six grades are in the elementary schools and the next three are part of a junior high

school, the elementary school child goes home to lunch (often to poorly prepared and inadequate meals) and the responsibility of the school becomes one of special feeding for the undernourished, the tuberculous and the crippled.

Again in some communities where a majority of the parents are employed the school is faced with the burden of the noon lunch for most of the neighborhood children of elementary school age. Unless the schools provide a lunch the child must depend upon the neighborhood store for his noon feeding. In one case observed by a Cleveland nutrition worker, a seven-year-old girl was presenting her mother's grocery charge book to the grocer and receiving a cup of coffee and a piece of pie every noon for her lunch. Needless to say the child's entire physical condition indicated the type of food she was receiving and led to the official checking of her diet.

In the Cleveland elementary schools, special morning and afternoon feeding services have been established for undernourished children. The cost of these two feedings is thirteen cents a day, and is paid by the board of education. The menu varies from day to day. A typical example is as follows: Monday morning—cornmeal mush cooked with

raisins and a half pint of milk; Tuesday morning—stewed prunes, whole wheat bread sandwich and a half pint of milk; Wednesday morning—oatmeal and a half pint of milk; Thursday morning—baked apple, whole wheat bread sandwich and a half pint of milk; Friday morning—cream of vegetable soup, whole wheat bread butter sandwich. The daily afternoon menu consists of a half pint of milk and a whole cereal bread sandwich and butter or graham crackers.

#### *Nourishing Foods Are Served*

All the cereals are cooked in milk and all the sandwiches have a lettuce leaf between. Frequently dried fruits are added to the cereals. As a rule whole cereals are used. There is a cycle of menus covering four weeks, so that each morning feeding is different throughout the month. In special cases concentrated foods, such as egg-nogs with fruit juices and malted milk with a reasonable amount of chocolate, are excellent aids in overcoming malnutrition.

For the regular noon feeding of normal children special menus are provided, since the child is too young to make his own selection intelligently. The menus include an abundance of milk, fresh fruit and vegetables, whole wheat bread and butter and sandwiches. The total charge to the child is eight cents.

In some poor districts teachers have clubbed together to raise funds to feed the child who cannot eat at the noon hour.

A sequence of standardized recipes have been prepared by the board of education lunchroom department. A typical menu is as follows:

Cream of vegetable soup	Creamed noodles and cheese
Bread and butter sandwich	Apple butter sandwich
Stewed prunes	Cocoa
Cocoa	Fresh fruit
Cream of tomato soup	Vegetable stew
Bread and butter sandwich	Bread and butter sandwich
Gelatin	Milk
Cocoa	Cup custard

A table is provided at which additional food may be purchased, such as penny milk chocolate bars, milk, fruit and whole wheat bread sandwiches.

Not only must the feeding of children be carefully considered, but also cases requiring special attention may demand other adjustments. Fatigue, lack of sleep and rest, physical defects and diseases, such as enlarged adenoids and tonsils and tuber-

culosis, besides requiring consideration in the preparation of diet, must all have attention directed to the cause. Not only are these physical corrections necessary to the children of the poor, but a surprisingly large number of educated and supposedly intelligent parents neglect their children when it comes to the observation and correction of physical difficulties.

One of the biggest problems in the elementary schools is the treatment of tuberculous suspects. In the Cleveland system many open air centers have been established. Here the child works in the open air. The same morning and afternoon feedings are given to these children that are given to all undernourished cases.

Underfed children are frequently less hungry than well fed children. Eating is not a habit with them, and they must be trained to eat the foods that are best for them. The food offered in their homes may be most unappetizing. Those without hearty appetites, or who are not aggressive, sometimes fail to receive a satisfactory portion of the foods available in many of the homes of a large city. Many times a large bowl of macaroni is placed in the center of the table and the child in the family who fails to grab his share goes without.

#### *Feeding the Pupils in Special Schools*

There are special schools in many large cities for the blind, the crippled and the deaf. In some cases special provisions for service must be made to have the food brought to the child. Crippled children may not have the appetite of normal children due to their lack of exercise, which may result in cases of overweight or underweight. Attention must be paid to diet in these cases. Fifteen-cent noon lunches are provided in the schools for crippled children. Since it is necessary to transport crippled children to centers it is impossible for them to go home for noon feeding, and it quite naturally follows that the board of education pays for the food for this group, and the meal must be substantial. Special cases receive afternoon feedings when recommended by the medical attendant in charge.

There are other special services which always arise during periods of depression. Many indigent cases develop, and in large cities the total number of investigated underfed children is most amazing. The problem of indigent feeding in a large industrial community is a constantly increasing one. The recurring peaks and depressions of modern life seem to be more severe as time passes on. Although the average worker has made a fair salary during accelerating periods, he is severely hit when periods of depression occur. The bread line

of associated charities is reproduced in the indigent lunch line of the public schools. In an article on "Emergency Lunches" in the *New Yorker*, we find, "These children are lined up so that they need not starve or pay lifetime penalties for undernourishment." The latter part of this statement is more pertinent when undernourishment occurs during the early period of the child's life, and will result in a variety of penalties when they mature. A

which he presents to the cashier, who in turn checks against the indigent list. A report is sent monthly to the clerk-treasurer's office covering all indigent feedings, and the lunchroom department is reimbursed from state funds. These receipts are in turn credited to each individual school according to the total services rendered.

This year the number of indigent feedings has more than tripled. In one school alone the number



*"Let's eat," is plainly written on the happy faces of these crippled pupils attending the Lapham Park Fresh Air School, Milwaukee, as they prepare to eat the simple and nourishing school lunch.*

healthy citizenry in the future will depend on how well we take care of the indigent during the trying periods of depression.

In New York City, 35,000 free lunches a day are served. Central kitchens are used to supply most of the food, although some is cooked upon the premises with the assistance of the children themselves. In Ohio a special state fund is available for the feeding of cases certified by the attendance department. Every month a list of indigents is sent to each school including junior and senior high schools. The regular fifteen-cent special is served to the indigent children. The fifteen-cent special menus were discussed in detail in the article in the May issue. A card is given to each indigent child

of indigents has increased from eighty-seven to 442. In a survey made by the lunchroom department of the Cleveland Public Schools last year (1930-31), and in a practical duplication of this study made by the American Dietetic Association, we find some interesting figures. In New York, Chicago, Philadelphia, Los Angeles, Buffalo, Milwaukee, Seattle and Jersey City, definite provisions are being made to take care of these groups. The process through which pupils are selected for this service varies. In New York City, the principal decides. In Philadelphia, the schools cooperate with the director of the White Williams Foundation. In Buffalo, the principal selects eligible candidates. In Milwaukee, the nurse investigates each

family before the principal issues the ticket. In Chicago, penny lunches are served in sixty schools. In Washington, the service is confined to tuberculous pupils only, and in Jersey City and Syracuse, to crippled children.

The procedure for obtaining funds varies considerably. In New York, a mayor's emergency fund is used, which is collected from teachers and other paid city officials, and there are contributions from parent-teachers' associations. Extra employees required are paid from funds raised by the Prosser Organization, an outside committee. The Association of Home Making Centers pays for the distribution of food from central kitchens to

schools possessing no lunchroom equipment of their own. In Chicago, the parent-teachers' association, the school loan fund, teachers' organizations, \$10,000 received from the Chicago Tuberculosis Institute and \$6,000 from a surplus fund accumulated by the sale of penny lunches six years ago, contributed to the support of indigent feeding.

In Detroit, one-half the cost is paid by the cafeteria system and one-half by the fund raised by the mayor's relief committee. In Los Angeles, the parent-teachers' association and the community chest, coupled with gifts and donations from associations and individuals, have been utilized. In St. Louis, individuals and various organizations have raised a fund, organizing the children's lunch association. Serving is done by the home economics department. In Boston, the board of education contributes to midmorning feeding in the primary schools. In San Francisco, the parent-teachers' association contributes. In Buffalo, the federation of educational associations raised \$17,000, while in Milwaukee, a rotary fund was set up in the school budget for this purpose, complying with the state law providing for indigents. In Washington, D. C., a congressional appropriation was made to be utilized with contributions of charitable associations. In Newark, organizations and social agencies have contributed. In addition, the schools have raised a fund of \$12,000 which has been contributed to by teachers and is used to supply food to needy families rather than direct feeding in the schools.

#### *What Other Cities Are Doing*

In Seattle, lunchroom earnings take care of the problem, and in Jersey City a budget has been provided by the board of education for the feeding of crippled children. In Toledo, individuals, parent-teachers' organizations, clubs and high school cafeterias have cooperated to solve the problem. In Columbus, like Cleveland, the state indigent fund is utilized, and in Syracuse the crippled children are fed by the city department of health. In Trenton, a few are taken care of by a welfare fund. In Cleveland, in addition to the indigent state feeding fund, individual teacher contributions take care of those not provided for by the fund itself. In Tremont School, the teachers last year raised \$2,224 for food, plus money for 483 pairs of shoes. In addition, a special fund has been raised in Cleveland for the supplying of milk and crackers to groups not coming under the state indigent fund requirement. One of the newspapers cooperated to a considerable extent with the board of education in raising money. Since this does not require cafeteria service, the distributions are handled

BANQUET MENU, No. 2, \$0.30			
Size of Serving		Cost Per Serving	
4 oz.	tomato cocktail	\$0.02	
1/4 lb.	fillet of haddock	.06	
4 T.	beet relish	.01	
1/2 cup	scalloped potatoes	.025	
1	roll		
1 pat	butter	.02	
1/6	apple pie	.023	
1/10 qt.	ice cream	.025	
1 cup	coffee	.03	\$0.213
BANQUET MENU, No. 56, \$0.40			
1/2	grape fruit	\$0.05	
1/4 lb.	Swiss steak	.059	
1/2 cup	mashed potatoes	.019	
1/2 cup	buttered beets or		
See standard	carrots	.026	
recipe	sliced vegetable salad	.038	
2 slices	whole wheat bread		
1 pat	butter	.017	
1/10 qt.	ice cream	.025	
1 slice (3 1/2 x 3 1/2 x 1")	sponge		
	cake	.018	
1 cup	coffee	.03	\$0.282
BANQUET MENU, No. 113, \$0.65			
1/2 cup	fruit cocktail	\$0.032	
	salted wafers	.01	
2 slices (4x3x1/4")	baked ham	.088	
1	baked pineapple ring	.02	
1	candied sweet potato	.036	
1/2 cup	broccoli with hollan-		
	daise sauce	.093	
	or		
1/2 cup	fresh spinach	.05	
1	cherry perfection		
	salad	.037	
	assorted relishes	.02	
1 1/2	rolls		
1 pat	butter	.03	
1/8 qt.	ice cream	.031	
2 T.	chocolate sauce	.004	
1 cut	fresh cocoanut cake	.025	
1 cup	coffee	.03	\$0.456

*The right kind of food not only makes possible proper physical development but also promotes quicker thinking and thus contributes to school efficiency, especially for handicapped and indigent pupils.*



directly by groups of teachers in elementary schools with the cooperation of the medical department.

Throughout the country all sorts of agencies have been evoked to assist in this cause. Teachers and school employees have been assessed from 1 to 5 per cent of their salaries. Bakeries have contributed bread, and milk companies have given milk. Thirty-seven thousand dollars was raised in Philadelphia by the Lloyd Committee for Unemployment. In Los Angeles, the community chest contributed \$67,000.

Those determining the needy pupils to be fed may vary all the way from outside agencies to school principals or individual teachers. It is evident that the feeding of indigents is a definite problem which must be faced by the management of public school lunchrooms, and this problem should be given thorough consideration as a definite function that must be carried on to some degree at all times, for "the poor are always with us." When lunchrooms are strictly self-supporting a definite question should be raised as to whether or not the lunchroom department should contribute money to this particular type of feeding, since it is a matter of "robbing Peter to pay Paul." Children of a large community who are paying for their lunches and yet are so poor that they can barely pay for the cost of their own food should not be forced to contribute toward the feeding of those only a little lower in the scale. Charitable or state agency funds certainly should be utilized to meet this need.

Banquets are another type of special service. The title "banquet" may be a misnomer, since the average service is not the hotel conception of a banquet. However, various groups, such as football teams, clubs, alumni associations, parent-teachers' associations, teachers' meetings and

other strictly school organizations, desire the use of the cafeteria for gatherings wherein a meal must be served during other than school hours. Unless the lunchroom department stands ready to offer this service, groups will demand the use of the school kitchen with results far from satisfactory to the management in the way of equipment maintenance.

It is our belief that no group should be allowed to use the equipment, but that the lunchroom department should stand ready to provide meals to strictly school groups at reasonable prices at any time that comes within the regular school period, provided reasonable notice is given the manager, holidays and vacations excepted. In cases where the lunchroom department has been forced to turn over the lunchroom to private groups, it has been ruled that a member of the lunchroom staff must be employed to assure that equipment is used properly, that the food is not stolen and that the kitchen is left clean.

Teachers are likely to demand more for their money than most groups, and it is wise to have definitely standardized menus covering a considerable price range. Cleveland offers thirty-cent, forty-cent, and sixty-five-cent menus, with a total of 118 standard menus from which individuals or groups may select the one that pleases them the most. Great care has been used in developing these standards to assure attractive plates and a well balanced diet. Samples of each group are presented.

In spite of these standards, teachers' groups often demand variations. The office should be lenient in this case, since the good will of the teaching staff is essential to lunchroom operation. At the same time, however, substitutions should not be made more frequently than are necessary, and they should at no time be more expensive

than those covered in the standard menu, since they have been computed on an actual cost plus service basis. In Cleveland all changes are submitted to the headquarters office.

In figuring banquet menus, the salary of the manager, food, extra help and overhead must be included. In the thirty-cent menu, computation is made on the basis of cafeteria service, but table service will be offered at an additional charge of five cents a plate for groups of less than a hundred. Home economics pupils are sometimes used for service by principals or schools. When pupils of the school serve a meal they are given their dinners free. In this case of course, if the school contracts directly for table service, the lunchroom management figures only on cafeteria service cost.

#### *When Banquets Are Served*

All banquet contracts should be signed for by some responsible person, since children may contract for numbers they cannot justify. A standard banquet form has been provided in Cleveland which is reproduced here.

Managers must be careful to assure that menus are selected in which seasonal items are obtain-

CLEVELAND BOARD OF EDUCATION LUNCHROOM DEPARTMENT	
School.....	Date to be served..... Time to be served.....
<i>Standard Menu and Number of Menu</i>	<i>Changes in Menu</i> All changes must be approved by central office before closing contract for service.  Approved ..... Supervisor Date: ..... Changes in price if any ..... Number of servings..... Cost per plate..... Total cost.....
I will be responsible to the lunchroom department for the above articles.	
Name of club or society.....	Teacher in charge of club

able. One would not expect to be served fresh cranberries on Decoration Day.

Upon the completion of the banquet the special form provided is filled out, including accurate statements of quantities of raw material used, so that the office may accurately compute the cost of the banquet and charge it against the receipts. A statement of profit or loss on each banquet is compiled by the office following each service. In each manager's card file is a banquet card covering

each banquet, giving the exact size of service and the net cost of each serving.

The cost distribution for banquets is: food, 70 per cent; labor, 20 per cent; manager's salary, 9 per cent, and overhead, 1 per cent. A minimum of \$3.00 and a maximum of \$8.00 have been allowed for the manager's salary on banquets. Pay rolls of the help are carefully analyzed to be sure that they come within the assigned percentages.

The lunchroom department makes an effort to serve no banquets during the last week of school, since they interfere considerably with the closing of lunchrooms.

Banquets usually require additional silver and dishes other than standard cafeteria service. In Cleveland the lunchroom department has provided additional china and silver which are packed in special containers and stored at the board of education warehouse. When the banquet is held at a given school the additional plates and silver are requisitioned and delivered. They are then washed and repacked by the school serving the banquet and returned to the warehouse. To illustrate: The lunchroom cafeteria requires eight-inch plates for standard services which are too small for banquets; therefore, special nine-inch plates are provided in the banquet service.

#### *Interesting the Fathers and Mothers*

Other demands for special services occur on school picnics. The school picnic may require anything from T-bones for steak roasts to clams for clam bakes, not to mention relishes, buns, pastries or other desserts. This means careful planning, provisions for packing, delivering, and, above all, the necessity for collecting containers and such crockery and culinary items as may be borrowed. Forms should be available for this type of service and a careful check must be made of all articles loaned, since there is ample opportunity at the average picnic to lose things. It is advisable to persuade the average picnic group to utilize paper plates, forks, spoons, and cups, if possible, since it simplifies matters considerably for the lunchroom manager.

The lunchroom department can cooperate considerably with special school features, such as carnivals and education week. These offer excellent opportunities to sell the idea of the school cafeteria to the average parent. Every effort should be made during this week to make the lunchroom display educational and to have trained pupil guides take the parents through the lunchroom and kitchen, supplying them with ample information on how the lunchrooms are maintained, explaining that they are self-supporting, that the food purchased is of the highest quality and that

every effort is being exerted to serve balanced menus.

The average mother of the family is interested in the idea of good food at low prices and the father is interested in the mechanism of the potato peeler. He may like the idea of efficiency through mechanical means, and carries away the concept of a well organized cafeteria system.

#### *Service First, Then Sound Business Procedures*

Many a youth has persuaded his parent that he requires more money for lunch service than he actually pays, in order to obtain additional spending money. It is the duty of the lunchroom manager, therefore, to inform the public of the actual prices charged. Parent-teachers' association meetings and "open houses" offer an excellent medium for this form of publicity. Some principals have a tendency to maintain a continuous sequence of special events in the school, such as Latin days, health days and Shakespeare days. It is desirable to cooperate with these movements insofar as possible, through presenting some special feature of the day's menu that will add to the spirit of the occasion.

No greater compliment can be paid to the public school lunchroom system than to have both faculty and principal proclaim to the public that their cafeteria has always been an institution that could be depended upon for cooperation and service.

Public school lunchrooms are organized primarily for the purpose of serving noon meals to the average boy and girl of the public school system. They are, however, a service institution. When food is needed, the lunchroom should be ready to prescribe and provide the proper diet. Since they are basically self-supporting, the financing of special services is a constant problem. Indigent feeding is probably the most difficult one, since its peak load comes at times when money is the hardest to get. Charitable groups are always ready to contribute to the support of the "lame, the blind and the halt," so that funds for the feeding of crippled children are usually easily obtained; but when it comes to the everyday meal for the masses, the problem is not so simple.

#### *Efficient Management Defined*

Efficient school lunchroom management provides for all emergencies, develops forms that will keep the most unexpected demand in line with efficient business procedures and establishes rules to make possible courteous compliance with reasonable demands and at the same time to protect the manager against the request of those who would ask the impossible. Service must be the key word, followed by sound business procedure.

## The Child in School Is Subject of Four New Reports

Four reports of the White House Conference on Child Health and Protection have recently been received by The NATION'S SCHOOLS. These books, which are concerned with the child in school, are entitled: "Social Hygiene in Schools"; "Home and School Cooperation"; "Children's Reading"; "Safety Education in Schools."

These reports are important among the twenty-one volumes on child life that have been issued by the conference to date. Numerous treatises yet to be published will further enrich the literature on adolescent and infant problems.

Four fields were covered by the investigations of the conference: medical, public health, education and care of the handicapped.

The books are being published through the cooperation of the conference and the Century Co., New York City. They represent not individual opinions but a comparison of opinions and data by committees of men and women chosen for their high achievement within specialized fields. The authority back of the publications gives weight to the findings and recommendations contained in the volumes.

## How the Library Can Help the Pupil Choose a Vocation

How the library can help those who are trying to find their niche in life, is set forth in a booklet by Harry Dexter Kitson, professor of education, Teachers College, Columbia University, which has been called, "Vocational Guidance Through the Library."

"It is a principle of vocational guidance," says Mr. Kitson, "that in order to choose a vocation and make effective plans regarding a career, one must have information about many vocations. A large part of this information should be in the library, and the librarian should be prepared to produce it."

The booklet is a working manual to help librarians build up "vocational shelves." Two bibliographies are recommended. There are also listed books on the general question of vocational choice; books containing descriptions of various occupations; books dealing with a single vocation; national organizations interested in vocational guidance; books for persons interested in vocational guidance to young people.

In the appendix is listed a brief general bibliography covering the major fields of vocational guidance.

# Editorials

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## Pouring Out the Baby With the Bath

TODAY the school superintendent and others who are responsible for the management of school systems and educational institutions are confronted by problems they have never experienced before in their educational careers, or, if they have experienced them, they appeared in lesser intensity and offered some hope of solution. The problems are not only educational, but financial and social.

During the last quarter century the activities of the public schools have penetrated so far into the social fabric that any condition that tends to upset social living affects our educational enterprise. The most serious problem in our field is the almost hopeless one of attempting to provide education for a rapidly increasing school population with rapidly decreasing resources. In other words, we have the problem of trying to make ends meet when both ends are drawing farther and farther apart, due to causes that are entirely beyond the control of most of us.

In order to solve one phase of the problem, that of rapidly increasing school population, we are enlarging class units, combining sections, conducting schools on part-time or staggered programs and are continuing to use buildings that long since should have been abandoned. To attempt to solve the other phase of the problem, we are reducing teachers' salaries, putting substitutes in the place of regular teachers, replacing capable and experienced teachers by young and inexperienced teachers at lower salaries, dismissing teachers because they have committed the unpardonable error of matrimony or because they have had the temerity to reside outside of the municipal boundaries, and are filling their places by less expensive and less experienced teachers, a practice that cannot help but do far-reaching harm.

We are retrenching at every point possible. We are economizing on supplies and textbooks to such an extent that the children in many communities are forced to purchase their own supplies and are compelled to use textbooks until they have become so ragged and filthy as to be better communicators of infectious disease than of knowledge. We are postponing repairs to school buildings and in a few years we shall reap our reward by spending

twice as much on accumulated needs for improvements than we should have spent had we kept our buildings in repair from year to year. We are curtailing or discontinuing educational activities that have been rightly introduced into the school program as important parts of a modern educational plan and that have become an integral part of our schools.

What will be the ultimate effect on the welfare of the children of these drastic retrenchments and attempts at economizing? One of two things is true: Either our public school enterprise has been overexpanded to such an extent that it would be helpful to the school system to curtail some of our present activities; or, if that is not so, then the only alternative will be a lessening of educational opportunities, a lowering of educational standards and general educational impoverishment for the children of this school generation. If we admit, as any wise superintendent of schools will, that there are always some possibilities of financial saving in the administration of schools, and if we are willing, as a superintendent of schools should be, to yield until it hurts, there remain the strong possibility and the danger that the second alternative will be the sequel to the drastic retrenchments that we are now making in public education, and that, while the difference may not be marked for a year or so, yet, when we take stock, say in five years' time, we shall find that the public schools of this country have lost more in efficiency and in service than a generation can restore and that the children have paid the price of our shortsighted attempts at economy.

The educational impoverishment that the communities of this country will suffer as the result of the enforced economy will be a loss serious enough; but, if we just muddle through until a period of economic recovery returns, without having radically improved our present method of financing education or without having discovered new, better or more equitable ways of raising revenue not only for the support of education but for the support of all forms of government, then we shall indeed be in a sorry way. During this period through which we are passing we may have found ways of saving money. We may have discovered that certain activities we thought were essential are not relatively important after all. We may get rid of some dead wood that has been accumulating for centuries in our schools. Unless, however, we shall have found from this experience ways of improving the organization and administration of the schools and better means and more reliable sources of financing our educational enterprise, we shall certainly have poured out the baby with the bath.

—E. C. B.

## A Restatement of Policy

**I**N RESPONSE to a demand for a professional publication in the field of school administration, devoted to the interpretation of the results of research and the presentation of the better practices in the field, *THE NATION'S SCHOOLS* was organized five years ago under the able leadership of the late Prof. M. V. O'Shea and a group of professional associates. The expressed purpose of the founders was "to interpret and apply what is being revealed by research any place in the world for those responsible for the construction, equipment and administration of the schools."

The untimely death of Doctor O'Shea has made necessary certain major changes in editorial personnel. A restatement and elaboration of the fundamental editorial policies seem desirable at the present time.

We believe in the basic importance of widespread popular education as the most vital agency through which social progress may be achieved. Our function as a contributing factor in this field is to fight aggressively not only to maintain but constantly to raise and to improve the general level of educational effectiveness through giving aid and stimulation to the executive and administrator.

Significant developments and accomplishments in philosophy and principles, in laboratory and applied research and in progressive field practice will be reported and interpreted with an ever increasing degree of effectiveness and completeness. The best and most beneficial thoughts of outstanding leaders in the field of American education will be presented with each issue. During the course of each year we shall strive diligently to cover every phase of activity. The general divisions of organization, the school plant, child accounting, finance, personnel management, textbooks, supplies and equipment, instruction and public relations will be treated with the degree of emphasis that current need demands, without either narrowing compartmentation or deadening standardization.

New movements, practices and general problems in the field of education will be considered and interpreted in their relation to the ultimate welfare and improvement of general educational activity. Under no circumstances will the magazine lend itself either to individuals or to institutions as an agency for propaganda. Editorial comment will continue to be fearless, independent and progressive.

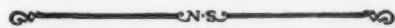
The relative absence of the critical faculty is one of the weaknesses of American education. We believe that the provision of means for the development of an objective critical faculty will be of

genuine ultimate value to educational growth and development. Ample provision will be made for the expression of individual opinion and criticism through the development of a Forum open to all who have salutary criticism or constructive suggestions to offer in any field of theory or practice. This Forum should serve not only as a clearing house for expression but also as an impersonal means of harmonizing diverse opinion.

Education will grow and develop as the cooperative nature of this highly complicated and intricate activity is more fully understood and appreciated by those who have indirect as well as direct interests. Those individuals and groups who serve the schools in supplying materials and goods, buildings and equipment will perform their work more effectively and intelligently as they are brought into closer and more understanding relationship with the professional educator. We shall therefore attempt through timely articles that explain such relationships, through personal contacts and through extramagazine activity to assist in bringing about mutual understanding among the various groups in the school field and consequently more harmonious and effective operating conditions.

A professional magazine's obligation to its readers does not end with the delivery of the published numbers to its subscribers. We expect to increase and expand the scope of our service division so that executives, administrators and purveyors to the profession may receive confidential information, suggestions and advice in the solution of their many perplexing problems.

The achievement of these policies depends to a large extent on the degree of cooperation developed between the entire editorial staff and the subscribers. It will be effective insofar as we are able to maintain and to develop that delightful relationship between the reader and the editor that has characterized *THE NATION'S SCHOOLS'* first five years.—A. B. M.



## Publicity That Cements Community and School Relationships

**F**ORTUNATE is the community in these days that has an alert group of citizens possessing really intelligent information regarding the work of its school system.

Schools may engage in many types of publicity that, even in these somewhat difficult times, will interest the citizens in protecting the school against inadequate financial support. Publicity was an effective method between 1919 and 1921 when the

changing value of the dollar made it necessary for school administrators to obtain unusually large sums of money to carry on their school programs.

There are, however, some real differences between that period and this. Then taxable incomes were increasing. The cost of everything was going up. Now the income is, generally, drastically curtailed, and, in some items at least, lower costs prevail. Even these difficulties may not be effective in interfering with the school if influential citizens have sufficiently well established ideals regarding the needs of modern education. The difficulty comes in trying to establish these ideals in the face of the situation that exists.

What is this modern education that we have defended so strenuously? What is the progressive school? What is the project? What do extraclass activities contribute to the education of the child? What changes in society make necessary the development of vocational and other highly differentiated curricula in our high schools? These are the questions that need to be answered in the minds of the general public.

We have reached a new stage in school-community relationships. Publicity is not now sufficient, although it still has its place. It is not enough to influence the public, often by emotional appeals, in regard to these educational reforms that the school profession has agreed upon. In fact, certain experiences during the last eighteen years have made many citizens suspicious of anything savoring of propaganda, and some publicity does not always conceal its propaganda elements. Nor is a program of public relations sufficient. This term implies the establishment of good will through a long continued policy of informing the public by methods that appeal to the intellect.

We have reached the stage where participation on the part of the public may be accepted as a realizable ideal. It is not enough that parents and other citizens know what the schools are doing. They must learn that the educative process cannot be made fully effective until those responsible for the out-of-school environments of the child know how to control those environments for child welfare.

Getting participation on the part of the alert members of the community is not an overnight task. It is a long time process. It will come about through the giving of information so frequently and so effectively that ideals and habits become thoroughly established. Perhaps with the average citizen the most effective way of securing this result is through the concrete experience he acquires in participating in the education of his own John and Mary.

School men react differently to the parent-

teacher association, and these reactions are doubtless justified by the experiences they have had with this organization. Parent-teacher associations, like schools, are good, bad and indifferent. An encouragingly large number of these associations is moving up into the group of those that are of genuine educational value. The parent-teacher association can be very useful in obtaining the participation of parents and other citizens in the educational program of the community. It can help them to acquire an understanding of what the modern school is by continued contact with the school. If these citizens apply what they learn to the home and other out-of-school agencies, they may gradually acquire an insight into what those in the profession of teaching are trying to do. They may thus come to see that education and schooling are not synonymous; that education is really a continuous process, and that it is futile to expect the school alone to carry the whole burden.

With citizens understanding this point of view we can be much more certain that any curtailments in our educational expenditures will be due to genuine economic difficulties. The curtailment in the educational budget is likely to come last rather than first, for the simple reason that thinking persons know what is likely to be the effect.

A school system that has been working in this direction is in a position to realize dividends on its efforts. For other schools, now is not a bad time to begin to stimulate the intelligent participation of the citizens of its community in the educative processes.—J. E. B.

### Scholarships for High School Pupils

HIGH school principals are likely to receive many calls at this time of the year for information about scholarships at various colleges and universities. In order that proper assistance may be given to these pupils a bulletin has been issued from the Office of Education entitled, "Scholarships and Fellowships, Grants Available in United States Colleges and Universities," Bulletin 1932, No. 15, price thirty cents.

In this handbook will be found a list of 34,013 scholarships and fellowships which are offered at 402 colleges in the United States ranging in value from less than \$50 to as high as \$2,500. These scholarships total about ten million dollars. The oldest is available at Harvard University—a scholarship that was given by Lady Ann Mowlsen of London when Harvard was only seven years of age. Considerable attention is given to scholarships established by state legislatures. Twenty-two states have some grants of this kind.—W. J. C.

# Happy to Say—

By WILLIAM McANDREW

**E**SSENTIALS of the good teacher, says the training school commencement orator, are only two—personality and skill.

**I**'M not so sure about personality.

**M**Y FRENCH teacher had personality plus. She was charming. The children loved her. She radiated entertainment and cheer. Women's clubs adored her. Homes welcomed her. Eight trips abroad had taught her all of Europe's people including the Scandinavian. Her children failed in the state examinations in larger proportions than those of any other teacher in the commonwealth.

**S**HE knew her subject so well she never prepared a lesson.

**T**HE main trouble was too much personality.

**R**EBUBEN POST HALLECK used to say, "Pass by the teacher who is said to have 'poise.' It's an alibi."

**P**ERSONALITY is worked to the limit in applying for places. It shows in looks, dress, manner and speech. It is an asset in politics. It captivates school boards. It catches the employer who boasts, "I can determine ability by a five-minute interview."

**T**HE Massachusetts Institute of Technology lost Fred Newton Scott, one of the great teachers of English, by failing to consider his record, but by appraising his personality.

**P**ERSONALITY can clothe bunk to look like ability.

**D**OUGLAS was thought to have more than Lincoln; McClellan, more than Grant or Sherman. Edison, none.

**P**ERSONALITY doesn't generate skill; it tries to do without it. But skill in teaching does develop personality.

**T**RY to bring your whole class to success. What happens to you? You become interested in your backward children. Your sympathy awakens. A triumphant joy gets you when they go ahead. You come to like them. They, then, like you. Presto, you have personality.

**S**KILL is know-how, ability, delivery of the goods. If you are not pretty sure you have it, you haven't it.

**"H**OW many of these children will you have ready for promotion?" I asked an applicant for the position of teacher of general science.

**"W**HY, all of them," said he, "unless somebody has a long sickness or moves away." "What makes you so sure?" "My previous promotion record."

**H**E TOOK seventy-five pupils. All of them in the end passed the regents' examination.

**G**EORGE SHUTTS, William Lattimer, James Sturges, geometry teachers, brought their classes through, girls and all, year by year, without losing one. None of these teachers banked on his personality. Each had the same goal: to get 'em through.

**S**KILL is the old north-Europe word for cut, cleave, divide. Skill in teaching divides the problem, cuts the difficulties into small pieces and gives each the treatment it needs.

**T**HE skilled teacher has been taught how to find, record, and chart the weaknesses interfering with the advancement of each child and what the proper treatment is.

**T**HE skilled superintendent knows how to guard early the children against failure at term end.

**S**O MANY solid books on teaching are in print that teachers can be engaged and retained on the basis of the progress of their pupils.

**T**HIS is the only honest use of public money for teaching.

**I** HEARD Principal Jimmy Sheppard, after a brand new board president had told an audience the stupidities of teachers he was going to correct, stand up and respectfully ask for the names of the schools the president had visited and especially of any school that had a teacher of the sort the president had described. "I have been working alongside of teachers for twenty years," said this Truthful James. "I could tell our principal imperfections, but I never knew a teacher who had any of the imaginary faults the president has listed."

## A Rural Adult School That Has Far-Reaching Values

By THOMAS L. NELSON, Principal, Yuba City Union High School, Yuba City, Calif.

*This department of rural education is conducted by Helen Heffernan, chief, division of rural education, state department of education for California, Sacramento.*

A PROGRAM of continuous education in a rural community might be viewed from several angles, from the principal's standpoint. There might be a program of continuous education of his teachers, a program of continuous education of his board of trustees or a program of continuous education of the community through the newspapers. Any one of these programs would be worthy of discussion but it is my intention to consider here a program of continuous education of

the lay public, especially the older members of it.

Such a program should probably start with the child's parents before the child is born. It should then continue through the preschool age, the kindergarten, the grammar school, the junior high school, the high school, the junior college and possibly the university. There are no doubt some pupils whose formal education should cease before the junior college and possibly even before the high school is reached, but for the great majority



*Three members of the large class in rug making display some of their work. This class has been popular and has drawn women to the school from all sections of the community.*



*Members of the recreation class, dressed in costumes of the days of forty-nine, presented a historical pageant, "Promised Land," depicting everyday life during the days of the gold rush.*

I believe at least a high school education is desirable.

From the day we are born until the day we die we go through a continuous process of education. Part of this education is informal and part of it is formal. Formal education has usually been thought of as beginning with the home and continuing through the school until the pupil graduates from one of its divisions. Only recently has much been said about continuing this formal education to include adults. The adult education movement is developing rapidly and may become one of the most important divisions in the program of formal education.

Thorndike has dispelled the belief that adults cannot learn as readily as children. In fact, he has found that they can learn faster than children. What, then, is to prevent adults from going to school and learning new things, except the absence on their part of the desire to learn? Adult schools can be established in almost any community and the desire to learn can be created even when it does not exist.

Modern adult education must provide more than the old stereotyped "night school" classes. A new

name is needed to convey this newer concept. The venture in adult education in Yuba City Union High School, Yuba City, Calif., came to be known as the Yuba City Adult School. One real adult interest in the community was music. Two choruses were organized, one for men and one for women. A local minister proved to be an excellent teacher and leader and a special teacher's credential was obtained for him. These choruses became popular and were asked to sing at various meetings in two different counties.

Participation in the chorus helped to establish the adult school as a source of valuable community service and interest. Another course taught was rug making. Such a course may seem of little community value but it came to have far-reaching benefits. The women grew enthusiastic over the making of old-fashioned hooked rugs and the instructor was kept busy keeping ahead of the class. Eventually the rug making activity had as one of its outgrowths an intensive study of the history of rugs and the group was thus led into a discussion of the history of many countries.

It was natural that the rug making activity would develop interest in other homemaking

*In costumes of a bygone day, these members of the adult school welcomed visitors to the "Folkways Fair," an educational exposition based on early days in California.*



crafts. Study of design and color directed attention to problems of home decoration. Homecraft classes developed in which basketry, block printing, velvet tooling, pottery and weaving were taught.

The interest in the rug making class led to an expression of community interest which was called the "Folkways Fair." Making rugs stimulated interest in old hooked rugs and this led to a study of the days of forty-nine in California and of other early history. Part of the class period was devoted to an educational exposition with exhibits of pioneer relics, antiques, curios from other lands and a fashion show of styles of the past.

The members of the class scoured the country and the number of antiques and relics that they brought to the school for the exhibit was almost unbelievable. A curator estimated the value of the articles at tens of thousands of dollars. Several classrooms were cleared and a room was given to each type of exhibit. One of the most interesting displays was that of the pioneer, or forty-nine room, with its old spinning wheel, miners' tools,

pistols, guns, powderhorns, gold coins, and strong boxes. This exhibit aroused interest in the two neighboring communities. Merchants across the river, not to be outdone, decided to put on a pioneer celebration. Main Street was turned into a street of the days of forty-nine and there was a parade of oxcarts, stagecoaches and miners, flanked by store windows full of relics and costumes of those days.

Another class that has been successful assumed the characteristics of a forum. The class started with a series of lectures and discussions on international problems such as "A Bird's-Eye View of Europe Today"; "Our Latin-American Neighbors"; "Russia Under Bolshevik Control"; "The Fascist Régime in Italy"; "Germany Under the Republican Form of Government"; "Japan as a World Power."

This series proved so popular that another group of lectures on Russia, Italy, France and the Orient followed. The success of this type of work is one of the most encouraging signs of progress in the adult school. The community has developed

an interest in world topics as well as in rug making, basketry, weaving, recreation and in its own history and surroundings.

A community as rich as this one is in pioneer history should not neglect it. A class in local history and landmarks conducted by a daughter of one of Sutter County's oldest pioneer families was of great interest to the adult pupils.

Another project that was an outgrowth of the recreation class was the production of an historical pageant called "Promised Land." This, too, was probably an outgrowth of the "Folkways Fair," but it put the early history of Sutter County into dramatic form. It depicted the everyday life in the days when men panned for gold and women prayed for success. On the stage were seen such men as Stephen Field, General Sutter, General Bidwell and Black Bart, the notorious stage robber, as well as Indians, Mexicans and Chinese who lived in this section in the early days.

One of the most gratifying features of our adult school has been the way its influence has spread. I have already mentioned how the "Folkways Fair" led to a big celebration in a neighboring town. This in turn led to the establishment of a museum where relics will be gathered and preserved for the benefit of the community, the tourists and others who are interested.

The influence of the recreation class has spread throughout this and the adjoining counties and many of those who learned the games and folk dances are now instructing recreation groups at farm bureaus and other meetings. This class has served as a training school for recreation leaders.

#### *The Homecraft Class and Its Possibilities*

The homecraft class has served as a center for the beginning of the arts and crafts sections of many women's clubs. Women from neighboring communities come to this class to learn about crafts in order to teach the work in their clubs. Women's clubs are becoming a great educational force, and guidance of this force on the part of rural high schools is desirable.

In order to keep in close contact with the opinions and needs of the adult school members, it was decided to have a group of student commissioners and through them to keep in touch with the interests and desires of the classes.

Principals are beginning to realize that an adult school is of value to their day school. The time and trouble necessary for the administration of such a school are justified in improved public relationships. Many of the adults who come to the Yuba City Adult School are parents of children in the school. Through their adult classes they become better acquainted with the school and its teachers,

and this helps to win their friendship and loyalty.

It is the ambition of this high school to serve the whole community, old and young. It is hoped to have the high school facilities in constant use for the cultural and economic improvement of as many members of the community as possible. The plant is in use practically every minute of the day from eight-thirty in the morning until ten o'clock at night five days in the week. This record is one of beginnings. In these beginnings, however, is a movement toward an ideal of a community in which education is a never ceasing process.

### **"Yes Men" Not Wanted as Aids to the Superintendent**

No school teacher or principal should be a "yes man" to the superintendent of schools, and school men and women should not take themselves too seriously, warns Paul C. Stetson, superintendent of schools, Indianapolis. These sentiments are taken from an address given by Mr. Stetson at the meeting of the National Education Association in Washington, D. C. Freedom to do independent thinking, to try experiments and to carry out creative activities should be given principals by superintendents, he contends.

"The principal," he holds, "should have a good building, well heated and ventilated, and well kept, in order that he may be relieved as much as possible from limitations caused by material conditions, and he should be permitted to work under the best of conditions of the intangible sort, the latter being the most important.

"The principal's sense of humor is the one trait, aside from his health, that a principal or superintendent should guard most jealously. This is only another way of saying that he must not lose his perspective of the relative importance of either himself, his school or the many trying daily irritations incident to his office.

"Every superintendent welcomes the fearless principal whose intellectual honesty will not allow him to agree with all that is planned, but whose sense of loyalty and professional spirit make him willing, once he has expressed his convictions, to carry out plans he may not think are wise.

"A school system which does not have an official to whom is delegated the responsibility for making final decisions would soon become so chaotic as to defeat its own ends. But in the fields of the materials of instruction, teaching technique and classroom management, it is both possible and wise for superintendents and principals to allow a wide latitude in the procedures to be followed. This is true democracy in school administration."

## Schoolhouse Planning:

# Attaining Functional Efficiency by Means of Constant Appraisal

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision,  
School of Education, University of Michigan

**A**S VITALLY important as planning and executing the school plant program is the third phase in functional activity, appraisal. Not only must the working of the plan be subjected to the most careful scrutiny but the results of all activity should be judged objectively and constantly in terms of the anticipated outcomes.

Appraisal is that activity which attempts through careful examination and study of facts and conditions to determine (1) the efficiency of operation of the several activities and (2) the value of the results of the activities in relation to the efficiency and value of instruction. Appraisal is an act of judgment based on observable facts. It corresponds in quality with the degree of effectiveness that has been employed in the collection of facts.

The first step in considering appraisal of the physical plant is its proper orientation in the entire plan or the scheme of approach. The physical plant must be recognized in its truly functional relationship as one of the major factors in the facilitation of the instructional process and the satisfaction of the educational and social needs of the adult community. As an agency, it should always be considered as a means rather than an end. The proper orientation of the physical plant provides the clew to the means of appraisal. Since it exists for the purpose of assisting the instructional process, its value must be considered and judged in terms of its purpose. There are four general divisions to be considered: (1) judgment of need, (2) efficiency of housing, (3) efficiency of mechanical operation and (4) instructional efficiency.

### *School Population Should Be Studied*

Appraisal of need may be made through constant study of the growth and the shifting of school population. The technique lies in the field of child accounting and is applied to the physical plant only as facilities exist or do not exist to provide for this need. Appraisal of need is judgment of the annually recurring facts with respect

to the number of children and their location. It must be considered entirely apart from annual prognostication of need, which is purely executive activity. It is concerned merely with the determination of how well this need is satisfied at any given period. Inadequacies disclosed fall within the executive activity. In this instance it is quite possible that the annual research, the appraisal and the new program of execution will appear practically as activity aspects of one continuous job—that of supplying the necessary physical instructional shelter. If a careful analysis is made, however, the fundamental difference between the planning and executing aspects, as they differ from the act of judgment, is readily observable.

### *Determining Housing Efficiency*

The policies of the board of education are the basis for determining the efficiency of housing. Since policies vary greatly in different districts it must be obvious that efficiency of housing can be judged only in terms of local policies and such criteria of judgment and the results of these appraisals will vary greatly. There is little profit in attempting a general intercommunity comparison of housing differences since the factors obtained are different. Efficiency of housing must be judged solely within the district on the basis indicated by policies.

Several illustrations will serve to explain these statements. One criterion of efficiency is usually the age of the building. A certain school district within an area operates without a policy of efficiency that considers the age of the building. The board of education assumes that a building renders effective service until it becomes obviously unsafe. Age is never considered. A neighboring district apparently has discovered that the age of a building, safety and physical inefficiency are similar and has therefore adopted a policy which states that "buildings more than fifty years old are considered inadequate." An entirely different set of criteria will be applied in these two districts in judging the age of school structures.

Certain districts have definite standards respecting class size. Other districts do not consider size as a major determinant and meet conditions as they arise. In times of depression class sizes increase and in times of prosperity the number of children in different groups diminishes greatly. Certain districts have policies respecting differential class size. Classes in health education are generally from three to four times as large as those in language education. Social activity programs, such as auditorium work, carry large classes and vocational laboratories carry much smaller ones. Other districts provide for a mean size of class and attempt to approach as closely as possible to this mean without paying much attention to minimum or optimum sizes. Still other districts determine class size only in terms of the physical possibilities of existing rooms. In these cases it is again necessary to appraise housing efficiency in terms of the prevailing local standard.

Practically all districts now have written or working policies respecting half-day sessions. They are almost unanimously considered inadequate. Recently, however, there has been considerable discussion of the problem and it is now by no means certain that radical changes in these policies may not be made in the future.

#### *The Rôle of the Temporary Building*

Some school districts consider the so-called temporary building as a distinct housing inadequacy. Others consider that in any rapidly growing community, temporary buildings should be included as adequate housing for outlying districts and are so designing these structures. Fundamentally, it does not appear to have any observable instructional effect whether these small structures are of frame or of brick construction. The final answer lies in the nature of the facilities that may be provided in the temporary structures. With the development of the technique of individualism in the instructional program, many of the former difficulties involved in rigid grading may be overcome.

Some school districts have adopted building policies that completely eliminate all basement structure except for operating purposes. Under these policies any basement rooms in old buildings must be considered evidences of inadequacies. On the other hand, there are many districts that still deliberately build schools with the so-called ground floor, a major part of which is beneath the grade level. Each of these units must be judged in terms of existing policy.

Again, some school districts have established a policy that considers anything higher than a two-story building a hazard in the elementary school. Still others use multiple-storied units for elemen-

tary as well as secondary education. While the advisability of many of these assumptions may be questioned, it is possible in appraisal at a given time and in a given district to judge only in terms of existing policies.

Intercommunity comparison is possible and may be desirable if existing policy is to be judged. This appraisal is not of the existing plant as operating under these policies but of the working policies themselves in terms of their relative adequacy. Through this means the conservative and progressive practices in different centers are brought together and their possible values considered. The board of education may then reject, accept, or accept with modifications the suggestions received through policy comparison. If no change is made appraisal of the physical plant progresses as before. If changes are made, then reappraisal of the entire plant is necessary in terms of the new policies.

#### *Classifying Physical Efficiency*

Efficiency of physical operation may be classified and translated under six criteria: operation, upkeep, safety, use, flexibility and expansibility. The standards of judgment under each of these heads must be determined through the adopted policies of the board of education and through statute or ordinance enactment by state or municipality.

Operation may be defined as the activities involved in the cleaning, heating and ventilating of the school plant. The standards for these activities must be set by instructional needs and the outcomes of available research in this field. There are today many opinions and schools of thought respecting heating and ventilating, but there are as yet no convincing data in regard to the real benefits of the numerous systems or plans. Standards of cleanliness may be definitely developed in each situation with respect to quality and frequency of sweeping and dusting and may be appraised periodically by direct visual inspection and by dust tests. Policies respecting temperature fluctuations and humidity content may be objectively measured periodically by the installation of a set of recording machines. The number of sets required for any school system will vary with the number of buildings and the length of the test period. It is not essential to provide for an unusually heavy investment in these recording instruments in order to secure adequate periodic appraisal.

A second factor in appraisal is the efficient use of personnel. Here again it is first necessary to establish standards of work and units of achievement. Area, differentiated with respect to type, is

a good basis for determining units of cleaning. These units must again be differentiated with respect to age and type of structure and for quality of cleaning instruments. All of these factors in any appraisal must be further conditioned by the quality of personnel and the massing of the work.

Policy is again the basis for establishing the standard. Certain districts make the practice of employing only fairly young and able-bodied men and women. Others yield to the social demand and make a practice of employing industrial cast-offs, or men over forty-five who can no longer stand the pace of the automatic machine. With respect to the massing of personnel and work some districts keep all their help during the school day. Since this represents several cleaning periods, with lapses of time or long rests between effort, the unit of work is correspondingly smaller. Other schools follow commercial methods, maintaining a general utility man during the school day to perform necessary services and to keep the corridors swept between periods, and bring on the entire cleaning force after school hours to work without interruption. Each policy will produce different results, and effectiveness of operation will be determined by both policy and methods of control.

Units of work in heating and ventilating will be determined by the volume to be served. Volume, as a unit for calculating effort and cost, is further conditioned by the age of the building, the character of the construction, the nature and age of the heating plant, the quality of fuel and the methods of firing. In addition in many cases there are local code requirements that arbitrarily determine temperature, humidity and air change requirements. When these do not exist the standards adopted by the American Society of Heating and Ventilating Engineers may be used.

#### *Upkeep Cost and Its Determination*

The cost of upkeep provides a rough index to the efficiency of construction. The unit of measurement may be either a cubic or area unit. The unit cost of upkeep may be readily obtained from cost records. A study of these data over a period of years will reveal many interesting facts regarding the efficiency of different types of construction. The contributing variables will be use, age and type of construction. Continuous study of these data will also provide a replacement index, to be considered with the other factors, and will supply supporting data for the elimination of physically unprofitable buildings.

Safety is a vital factor. A school building should be free from hazards of fire or panic. This statement applies to all buildings more than one story

in height or in which exit may not be readily made directly to the outside through windows or doors. The fire hazard may be determined by study of construction. Any structure built of fire resisting materials will usually meet the requirements of freedom from fire risks. The panic risk, however, is much more serious, and is also a more potent factor in injury and loss of life than fire. Facilities that will promote freedom from panic must be built into the basic plan, in the form of adequate corridors and exits so designed that a child may see an exit from any point in the building. The breadth of doors and the method of hanging are also factors in effecting safety. Further freedom from panic in even a well designed building may be secured by the frequent use of the fire drill in addition to definite instruction in this field.

#### *The Effectiveness of the Plan*

The ability to use a building effectively is a major criterion in physical efficiency. The relationship between absolute and working capacity has been discussed at length in an earlier article. The factor of use with respect to physical efficiency in this case rests chiefly on internal balance of physical units in relation to the curricular needs. Since a building is an expression of these needs at the time of construction any period of rapid change in organization or methods will tend to disturb the internal balance. Old buildings will therefore tend to be relatively low in use value unless the plan possesses other elements that make change possible. Annual studies of building balance in regard to use are necessary to establish the relative effectiveness of a given physical plant.

A plant cannot be arbitrarily eliminated because it is out of balance. If the plan is flexible balance may be easily restored through minor changes. Flexibility and expansibility are also fundamental to the plan. If these elements are not built into the original plan it is questionable whether it is economically possible to continue the building that has become grossly out of balance. The expense of redesigning is usually almost as great as the erection of a new building. If the basic plan is of the open type and readily expansible, it is sometimes possible to rebuild the interior with regard to economy. If the interior is designed with respect to maximum flexibility, it is also possible in certain instances to make some sacrifice in the original plans and to provide for expansions.

There are two aspects to the question of instructional efficiency. The first is the criteria concerned with the essential mechanics of the building and the second has to do with the actual contribution of the building to the efficiency of the instructional process. The second factor has not yet been solved

and there are now no means available by which the direct contribution may be objectively determined. The first series, relating to the general facilities, may be studied in the light of curricular demands. It is possible to determine whether the facilities are sufficient for the number of children to be housed. It is also possible to determine whether the numbers and types of rooms are sufficient for curricular demands. The ease in administration through location of rooms, convenience of certain facilities and the massing of certain elements to reduce congestion and crowding are easy to determine through statistical study. The requirements of natural and artificial lighting may be determined by careful research in each center. The effects of the standards of humidity and temperature on the children may also be determined. The effectiveness of use of equipment may be studied in relationship to methods and classroom practices.

The development of an objective attitude toward the physical plant and the development of research procedures, the outcomes of which will supply data for appraisal, will tend to dispel many old assumptions respecting the plant. The first is the theory that if a building is provided it will function effectively. Nothing is more erroneous. A building will serve adequately only insofar as it represents a direct translation of educational policies and curricular needs. It will serve effectively only if it is located with intelligence and in terms of drawing power.

Research will also forcibly indicate that for every dollar spent for building at the present, and under the most effective designing, scarcely more than forty cents will be reflected in direct use. The other facilities are operating or mechanical. This statement is based on the fact that even a well designed building will supply not much more than 50 per cent instructional area and that the relation of usable to absolute capacity may change this to 40 per cent. It is only through constant, progressive and objective research, however, that many of these baffling and difficult problems relating to the physical plant will be discovered and solved and the school buildings made more efficient.

## How Alabama Is Promoting Safety Education

Realizing the importance of instruction in methods of preventing accidents, the Alabama Department of Education is compiling a course of study in safety education for the schools of the state. The following brief bulletin listing for teachers agencies and activities that may assist in

promoting education is preliminary to the course of study to be issued later on.

**Organizations:** (1) the organization of a junior safety council; (2) the organization of a safety patrol; (3) the organization of Boy Scout troops, of Girl Scouts and Camp Fire Girls; (4) promote the safety drivers' pledge.

### *Determining Community Hazards*

**Surveys and special studies:** (1) a survey of the risks and hazards on the school premises; (2) a survey of the community with a view to detecting hazards; (3) a study of transportation of all kinds and the risks and hazards of each mode; (4) a study of practices in fire prevention; (5) a study of safe practices in athletics; (6) a study of the loss by accident in your county or in the state.

**Construction:** (1) make clippings of accidents of all kinds for a certain period and classify and tabulate these; (2) make reports of all kinds of accidents in the school and compile them; (3) promote the compilation of a good safety code; (4) construct container and assemble an adequate first aid kit for your school or home; (5) make safety posters as a school or class project; (6) make illustrated safety booklets as an individual, a class or a school project; (7) make a safety exhibit for the county fair or for community day; (8) arrange a parking zone for the school; (9) promote the placing of "school zone" signs where needed. If on a state highway, the state highway department must be consulted. If on a county road the county commissioners or county board of revenue, as the case may be, must be consulted.

**Publicity:** (1) arrange for an address at the school by a fire chief, a fire marshal, a fire insurance agent, a forester or by some other competent person interested in property and human conservation; (2) participate in the annual essay safety contest sponsored by the Highway Education Board, 1723 N Street, N. W., Washington, D. C.; (3) sustain a column of safety notes in the school publication; (4) engage in newspaper publicity.

**Special programs:** (1) observe a safety week fittingly; (2) put on a safety assembly program.

**Other organizations and activities:** (1) promote the writing of essays on safety; (2) promote unit of study in the compilation of rules for observing traffic regulations; (3) three minute talks by pupils, each describing an accident and telling how it might have been avoided; (4) tell safety stories and enact safety plays; (5) promote the selection of a safety slogan for your school; (6) institute fire drills; (7) write essays on "Our Police Department," "Our Fire Department," "Our National Government and Safety" or on other subjects; (8) dismiss school with a safety thought.

## News of the Month

# N. E. A. Leaders Discuss Plight of Schools at Annual Meeting

"THE Future of Radio in Education" was the subject of an address given by William John Cooper, United States Commissioner of Education, before the first general session of the seventieth annual meeting of the National Education Association, Atlantic City, June 25. The meeting closed with the meeting of the representative general assembly, July 1. The newly elected president of the association is Joseph Rosier, Fairmont, W. Va.

In the future radio will bring into the classroom the actual outside world, although at present educators are afraid to let this happen because of the type of advertising brought into the classroom, Doctor Cooper said. "If there could be brought into the classroom," he declared, "advertising that could be subjected to some test of accuracy, what a great thing it would be for the school as well as for the use of the product."

The morning session of June 27 was devoted to the theme, "Education, Crime and Social Progress," with the following speakers taking part: Lewis E. Lawes, warden of Sing Sing Prison, Ossining, N. Y.; Cora Wilson Stewart, director, National Illiteracy Crusade, Washington, D. C.; E. W. Butterfield, state commissioner of education for Connecticut, and Albert E. Winship, editor, *Journal of Education*.

The high peak of the convention was reached on the evening of June 27 when Florence Hale, president, National Education Association, delivered the presidential address on the subject, "Firm Foundations." In her address, Miss Hale pointed out some of the needs and conditions educators should have in mind today in deciding upon their aims of education and setting up their programs of study. These she designated as: (1) the establishment of principles and courage to stand by them; (2) teaching should be a profession; (3) spiritual values in education.

Radio was again brought into the limelight during the day's program with a discussion by C. M. Koon, specialist in education by radio, United

States Office of Education. "If educational leaders accept a broad social conception of education, they will realize with increasing significance the importance of harnessing radio and putting it to work to help bear the constantly growing burdens of education," he declared.

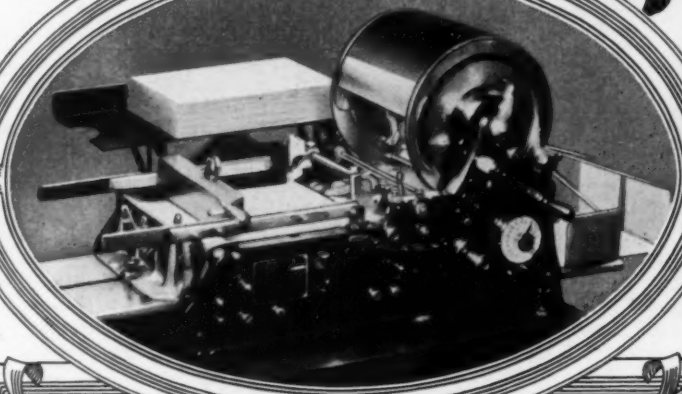
At a general session on June 28, the responsibility of American schools in training for industry and business was emphasized by a number of speakers: James A. Moyer, Massachusetts State Director of University Extension; William D. Boutwell, editor, United States Office of Education, and Inez Johnson Lewis, state superintendent of public instruction for Colorado.

### *When Retrenchment Is Dangerous*

Speakers at sessions on June 29 included George D. Strayer, member of the National Survey on School Finance, and Bess Goodykoontz, assistant commissioner of education, who read a paper by Commissioner Cooper. Doctor Strayer declared that the school program was endangered by retrenchment and that the reduction of teachers' pay and the curtailment of educational courses were causing a critical situation in the school field.

In the evening, the delegates were guests at a George Washington Bicentennial pageant.

The next day was devoted to a discussion of preparing pupils for their life work; teachers' professional organizations, and looking forward in education. Speakers included: R. L. Cooley, director, Milwaukee Vocational School, Milwaukee; Willis A. Sutton, superintendent of schools, Atlanta, Ga.; William T. Melchoir, professor of education, Syracuse University, Syracuse, N. Y.; E. Ruth Pyrtle, principal, Bancroft School, Lincoln, Neb.; J. Herbert Kelley, secretary, Pennsylvania State Education Association, Harrisburg; R. G. Reynolds, principal, Horace Mann School, Teachers College, Columbia University, New York City, and Augustus O. Thomas, secretary-general, World Federation of Education Associations, Washington, D. C.



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## News of the Month (Cont'd)

### Wisconsin to Hold Institute for School Executives

Problems of school administration and teaching will hold the interest of superintendents and principals at the Institute for Superintendents and Principals to be held at the University of Wisconsin, Madison, July 18 to 22.

The institute, which is sponsored by the school of education, is planned for city and country superintendents, supervising principals, elementary and secondary school principals, supervisors and directors of research, directors of guidance and others interested in administering public schools.

Professors A. S. Barr, F. L. Clapp and John Guy Fowlkes are in charge of the arrangements.

### Dr. William John Cooper to Attend Conferences Abroad

Dr. William John Cooper, U. S. Commissioner of Education, will represent the United States at the fourteenth International Congress of Secondary Education to be held in London from July 18 to 23. The following subjects will be discussed by the conference: out-of-school activities and their place in secondary school organization; the professional training of the secondary teacher; report on improvements that have taken place during the school year, 1931-32, in secondary school buildings and equipment from the points of view of teaching, esthetics and hygiene; the relations between the International Federation of Associations of Secondary Teachers and other international associations.

Doctor Cooper will also attend the sixth World's Conference of the New Education Fellowship to be held at Nice, France, from July 29 to August 12.

### Lower Prices for Film Strips Are Announced

New low prices for United States Department of Agriculture film strips will prevail during the fiscal year 1932-33, according to an announcement recently issued by the office of cooperative extension work of the department. Dewey & Dewey, 5716 Thirty-Fifth Avenue, Kenosha, Wis.,

was awarded the contract for film strip production because of the low bids submitted in competition with other firms.

The prices for film strips until June 30, 1933, will range from fourteen to eighty-five cents each, depending upon the number of illustrations in the series. The majority of the 135 series that the department has available will sell for twenty-eight and thirty-five cents each. Film strips are available on such subjects as farm crops, dairying, farm animals, farm forestry, plant and animal diseases and pests, farm economics, farm engineering, home economics and adult and junior extension work. Lecture notes are provided with each film strip purchased.

The popularity of film strips among extension workers, teachers and others has been due primarily to the reasonable prices charged for them, the convenience with which they can be handled and their effectiveness in educational work. A list of available film strips and instructions on how to purchase them may be obtained by writing to the office of cooperative extension work, United States Department of Agriculture, Washington, D. C.

### School Workers in Tennessee Must Hold Health Certificates

School teachers, bus drivers and janitors of Knox County, Tenn., must present health certificates to the county school board before they will be allowed to sign contracts for next year, the board decided recently.

### Teachers of Rockford Donate One Month's Service

When the teachers and other board of education employees of Rockford, Ill., were told that the schools would have to close a month early because of a shortage of funds, they decided to contribute one month's service so that the pupils would not be deprived of their usual forty weeks of school. This action by 600 teachers and other school workers saved the taxpayers of the city about \$90,000 while the schools served out the full term.

The teachers were rehired in the Rockford schools for 1932-33 with a 10 per cent salary reduction, after being moved up on the salary schedule.

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Field Fences, Baseball and Tennis Backstops, Garden Fences and Industrial Fences of all heights and types.

## News of the Month (Cont'd)

### Program Complete for Pacific Regional Conference

The program of the Pacific Regional Conference, World Federation of Education Associations, is complete and promises to give the delegates who go to Honolulu, Hawaii, a comprehensive picture of educational progress throughout the world. The conference dates are July 25 to 30.

Those who go to the enchanted island of Hawaii will not be disappointed—for it is noted for its hospitality. A special committee has been at work for months, planning entertainment that will also make of the conference a pleasant vacation.

Every visitor will be greeted in typical Hawaiian "aloha" style. This will include the presentation of a flower "lei" made by school children. Paper leis, as souvenirs will later be presented at the giant "luau"—Hawaiian feast.

### University Women to Meet in Edinburgh for Conference

The sixth conference of the International Federation of University Women is to be held at Edinburgh, Scotland, July 27 to August 4.

The program of the conference includes consideration of a report on the work accomplished in favor of disarmament, and meetings and lectures on such subjects as "Is the Secondary School Child Overworked?" and "Training and Prospects in Department Stores."

The special subject for discussion is "Does a University Education Fit the Modern Woman for Life in General?"

### Conference for Public School Heads Is Announced

A conference of public school administrative officers will be held at the University of Chicago during the week of July 18 to 22.

Instructors at the conference will include: Ben G. Graham, superintendent of schools, Pittsburgh; Edward D. Roberts, superintendent of schools, Cincinnati; Paul C. Packer, dean, college of education, University of Iowa; Don C. Rogers, director of research and building survey, Chicago

Public Schools, and members of the department of education, University of Chicago.

A cordial invitation is extended to public school superintendents and principals to attend the conference.

### State School Finance Committees Named for Survey Work

Committees composed of leading citizens in each state have been named by William John Cooper, commissioner of education, to work with the National Survey of School Finance. These committees were nominated by state superintendents and commissioners of education, and include state legislators and officials, school officials, university professors and other prominent citizens.

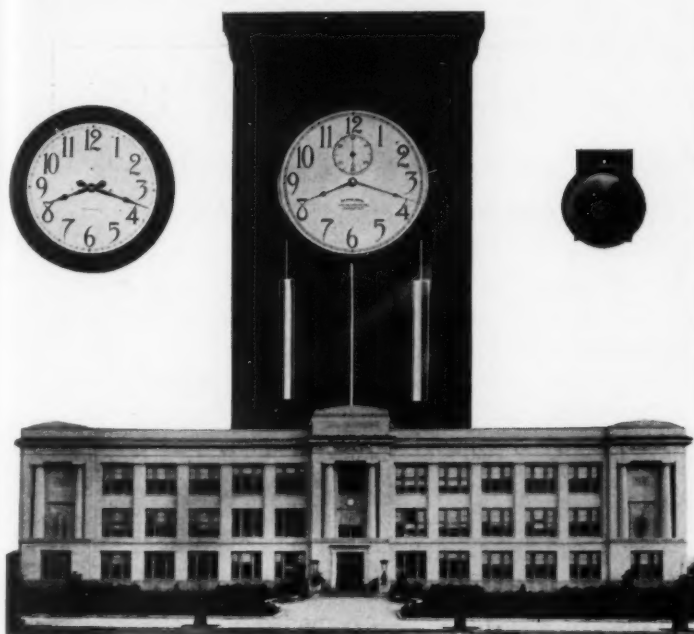
Leaders selected in each state will be informed of the progress and advance findings of the nationwide school expenditure study, and will be asked for advice from time to time by the national survey research staff.

### Culver Academy Becomes Trust of Permanent Foundation

Culver Military Academy, Culver, Ind., by action of its owners, has passed from the hands of private ownership and will become the trust of a permanent foundation it was announced recently. The announcement was made by Bertram B. Culver, president, board of trustees, in the course of the academy's thirty-eighth commencement exercises at a ceremony in which leading educators, representatives of the army and the navy, and prominent alumni and patrons of the academy took part.

The gift was made to assure the academy's perpetuation and its expansion as an endowed educational institution. To accomplish it the heirs have dissolved all aspects of their private ownership and have placed in trust for the foundation all buildings, property and funds of the academy, valued at approximately \$6,000,000.

The individual donors of this joint bequest are Bertram B. Culver, Mrs. Edwin R. Culver, Mrs. Bertram B. Culver, Edwin R. Culver, Jr., Bertram B. Culver, Jr., Henry Harrison Culver of St. Louis, and Gene Gordon Culver of Philadelphia.



## International combines EFFICIENCY with ECONOMY in school administration

SCHOOLS will open next Fall confronted with a twofold problem: Increased enrollment without increased operating funds. Strict economy measures must therefore be adopted, but never at the expense of efficiency. Every effort must be made to accomplish more with the least expense.

The International Electric Time and Program System meets the situation with *efficient economy*—through the closer control of school time.

This equipment permits greater teaching time; enables instructors to handle maximum sized classes; eliminates costly supervision; reduces maintenance (International clocks never require setting by hand); and establishes automatic control of class movement and study routines. All these items result in a *substantial reduction in the teaching cost per pupil*. Actual surveys have shown that International equipment is saving the country's schools thousands of dollars annually.

It will pay you to have an interview with one of the International representatives in your vicinity. He knows how to help you save money.

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The application of Lapidolith is quite simple and your own janitor can do the job very satisfactorily. If, however, you prefer to use the trained Sonneborn service organization you can do so at very reasonable cost.

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## In the Educational Field

DR. C. EDWARD JONES, superintendent of schools, Albany, N. Y., since 1912, has resigned.

D. J. McDONALD, superintendent of schools, Brazos County, Texas, died recently. MR. McDONALD had been closely connected with the school life of the county for more than twenty-five years.

WILLIAM F. ALLEN has resigned as superintendent of schools, Southern Pines, N. C. He has served the Southern Pines schools for ten years.

R. M. EIDSMOE is the newly elected superintendent of schools, Volga, S. D.

D. H. PATTON, superintendent of schools, Clinton County, Ohio, has been employed as superintendent of schools, Bellevue, Ohio.

DR. WILLIAM CAMPBELL CRAWFORD, founder and present master of the Boston Trade School, Boston, was recently given a testimonial banquet by his friends on the occasion of his coming retirement which will take place September 1. He is now seventy years of age. DOCTOR CRAWFORD has been principal of the Boston Trade School since 1911.

O. E. SIBERT, superintendent of schools, Smithville, Ohio, is the newly elected superintendent at Perrysville, Ohio. He succeeds J. C. WISSINGER.

DR. HERBERT HUME GADSBY, after thirty-eight years of service to the public schools of North Adams, Mass., as principal and principal emeritus, retired on June 24.

JAMES M. MANDEVILLE, principal, Gillies School, Detroit, and a principal in the Detroit school system for forty-one years, retired from active service in June.

DR. WILLIAM L. FELTER, principal, Girls' High School, Brooklyn, N. Y., for thirty years, will reach the compulsory age retirement provision on December 5 and will retire on February 1, 1933. DOCTOR FELTER has been a prominent figure in New York education for almost fifty years.

FRED M. WATERS is the newly elected superintendent of schools, Hendersonville, N. C.

E. A. SPARLING was recently elected superintendent of schools, Crystal City, Mo.

NICHOLAS MOSELEY has been chosen superintendent of schools, Meriden, Conn., succeeding C. C. THOMPSON.

J. W. WILLIAMS has been named superintendent of schools, Dalton, Ga., succeeding W. C. JONES.

H. S. UPJOHN, formerly superintendent of schools, Los Angeles County, California, has been named superintendent of schools, Long Beach, Calif. DR. VIERLING KERSEY, superintendent of public instruction for California, had accepted the superintendency at Long Beach, but later decided to continue in the state office.

FRANK RUSSELL PAGE is the newly elected superintendent of schools, Sharon, Mass. MR. PAGE was formerly superintendent at Watertown, and was recently headmaster, Utica Country Day School and Great Neck Preparatory School.

DR. WEBSTER STOVER has been named headmaster, Perkiomen Schools, Pennsburg, Pa., succeeding the late DR. OSCAR S. KRIEBEL, founder of the school.

A. H. LANCASTER has been appointed superintendent of schools, Dixon, Ill., to succeed I. B. POTTER. MR. LANCASTER has been principal of the high school at Dixon for a number of years.

VICTOR E. MASTIN is the newly elected superintendent of schools, Colony, Kan.

L. O. FLOM is the newly elected superintendent of schools, Aledo, Ill. Preceding his appointment he was principal of the Aledo High School, a position that will be filled by EDWIN H. ARFORD, Princeville, Ill.

J. LESTER BROWN is the newly elected superintendent of schools, New Carlisle, Ohio.

D. E. TAYLOR, superintendent of schools, Quenemo, Kan., has been elected superintendent at Williamsburg, Kan. L. W. MYERS, formerly superintendent at Oliver, Kan., succeeds MR. TAYLOR.

HENRY W. COBURN, superintendent of schools, Fort Fairfield and Easton, Me., for the last eight years, has resigned.

CARL W. MARSDEN, superintendent of schools, Palisades Park, N. J., has resigned and will be succeeded by R. J. HAVINGTON.

DR. R. O. STOOPS has been appointed superintendent of schools, Jacksonville, Ill., succeeding DR. RALPH YAKEL, resigned.

GOLIA RATHER is the newly elected superintendent of schools, Allen County, Kentucky.

G. W. CROZIER, superintendent of schools, Inglewood, Calif., died recently. He had been the first superintendent and had served the schools there for twenty years.

## "INTER-TWILL" WINDOW SHADES

for ECONOMY, STRENGTH  
and WEARING QUALITIES



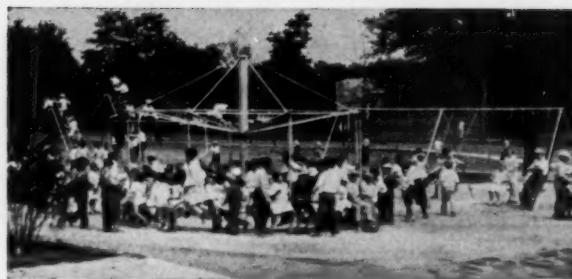
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How well are they protected against "hit skip" drivers who deliberately disregard meager sign appeals to "Drive Slowly—School Zone."

A Stewart Fence will effectively and economically police the boundary lines of your schoolground—it will keep the kiddies in a well defined area of safety.

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## In the Educational Field

DR. WILLIAM A. GORE has been chosen superintendent of schools, Hempstead, N. Y., succeeding DR. JOHN T. P. CALKINS. DOCTOR GORE has recently been an instructor in schoolhouse planning and school administration, New York University. DOCTOR CALKINS is accepting an executive position with the university.

W. L. STEPHENS, superintendent of schools, Long Beach, Calif., for the last twenty years, has retired. A thousand teachers participated in a reception which was given him, at which he was presented with a check for a thousand dollars to be used as a "play" or "travel" fund.

JOHN SMALL, superintendent of school property, McKeesport, Pa., has retired from active service. MR. SMALL is seventy years old.

W. E. NICHOLS is the newly elected superintendent of schools, Thomas County, Georgia.

EMMA SMEDLEY, director, division of school lunches, Philadelphia, for the last seventeen years, has resigned. She will be succeeded by CLARENCE B. KUGLER as acting head of the division.

A. L. THRELKELD, superintendent of schools, Denver, Colo., was awarded the honorary degree of doctor of education by the University of Colorado at its annual commencement exercises in Boulder, June 13. A similar honor was conferred upon DOCTOR THRELKELD in 1930 when he was given the honorary degree of doctor of laws by the University of Denver.

DR. PAUL MONROE, president, World Federation of Education Associations, and director of the International Institute of Teachers College, Columbia University, has been appointed president of the two American colleges, Robert College and the Constantinople Woman's College, at Istanbul, Turkey.

HAROLD P. THOMAS, director of research, Springfield, Mass., has resigned to become director of the department of education, Lehigh University.

ANDREW KLINKO is the newly elected superintendent of schools, Campbell, Ohio. His five-year term of service will begin September 1.

VERNE E. HOISINGTON has been elected superintendent of schools, Waterville, Kan.

BYRON SPANGLER has been elected superintendent of schools, Mercer County, Ohio.

CHARLES W. BRADLEE, headmaster, Country Day Schools, Kansas City, Mo., has been chosen headmaster, Pebble Hill School, Syracuse, N. Y.

O. F. WEYERMANN has been elected superintendent of schools, Peshastin, Wash., succeeding O. E. FAULKNER who resigned to accept a position in Pierce County, Washington.

LESLIE D. MOORE, superintendent of schools, Mt. Hope, W. Va., has been elected principal, Ripley High School, Ripley, W. Va. He succeeds R. L. CUSTER.

AARON F. DEMORANVILLE has been named superintendent of schools, Smithfield, R. I. With the election of MR. DEMORANVILLE, the town has a school official solely in charge of its own system for the first time since 1915, when it was taken under supervision by the state board of education of Rhode Island.

G. A. SWIFT, superintendent of schools, Blue Rapids, Kan., has been named to head the schools of Holton, Kan.

J. W. NICHOLS was recently elected superintendent of schools, Lexington, Ohio.

CURTIS E. WARREN has been elected to succeed Frank A. Henderson as superintendent of schools, Burbank, Calif.

EUGENE W. PRUITT, superintendent of schools, Talbot County, Maryland, has been named superintendent of education for Frederick County, Maryland, succeeding the late G. LLOYD PALMER. MR. PRUITT will assume his new duties on August 1.

SELMER H. BERG, superintendent of schools, Stoughton, Wis., has been named superintendent at Rock Island, Ill., succeeding J. J. HAGAN, resigned.

---

## World Federation Chooses Dublin for Next Meeting Place

Dublin has been chosen for the next biennial meeting of the World Federation of Education Associations.

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When You Go To  
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For Two and a Half*

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1050 Rooms, all with Bath and 4-Station Radio Speaker

In **Columbus** Its **The NEIL HOUSE**  
TOM A. SABREY, MANAGER  
655 Rooms, all with Bath—"Across from the Capitol"

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C. J. FITZPATRICK, MANAGER  
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Western Venetian Blinds are economical, easy to install, distinctive, safe, healthful—the last word in eye comfort for youth! Get the facts! Signing the coupon below will bring you our brochure entitled "Controlled Daylight Protects the Eyes of Youth." It will also explain our 30-day free trial and Photometric Test. Write for it today!

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Why not learn the scientific truth about illumination in your classroom? Our Photometric test is free for the asking. Sign the coupon and one of our Illumination Engineers will be glad to make this test in your classroom, free of charge, anywhere, any time.

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# Your School— Its Construction and Equipment

A Department Conducted by CHESTER HART, B.Arch., Chicago

## Saving Fuel Through Preventable Heat Losses

Prevention of heat loss is the fundamental method for making fuel savings. This obvious statement has often been overlooked, both in the design and maintenance of many school buildings. Yet the importance attached to the conservation of fuel is attested by every school heating system with its many heat controls and regulators used for the express purpose of reducing fuel consumption. This attention to the control of heat has developed many systems for accurately balancing heat supply and demand, but a limit seems to have been reached in making further fuel savings through more mechanical regulation and stoking.

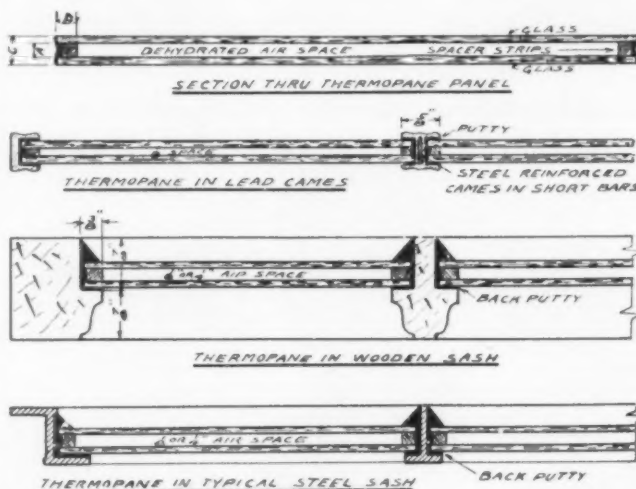
With a heating system developed to its ultimate efficiency in supplying heat, the next step is to prevent as much heat loss as possible. These heat losses occur through the walls, the roof and the openings of the buildings, but the greatest losses are through the windows.

The heat loss occurring on the average classroom wall is accounted for in the proportion of 86 per cent loss through windows and 14 per cent through the brick wall. The heat loss that occurs at the windows is of two varieties, infiltration and conduction. Infiltration accounts for 40 per cent, and heat loss through the glass for 60 per cent of the total heat loss at the window. From this analysis it is obvious that the weatherproofing of the window must be the next correction made.

Infiltration, which causes the 40 per cent loss, may be minimized in a number of ways. When windows are being selected for the new building, a thorough study of the weathertightness of all parts should be made, and the perimeter crack opening around the sash should be held to a minimum. Sufficiently large wind stops should be used, and a good grade of caulking and elastic cement used between the frame and the window opening. Weatherstripping should be used on all wood windows as another prevention of infiltration. The importance of the selection of proper windows at the time of building may be realized in lower maintenance and fuel consumption costs throughout the life of the building.

In the already existing building, maintenance of caulking, puttying and weatherstripping will do much to prevent this infiltration heat loss.

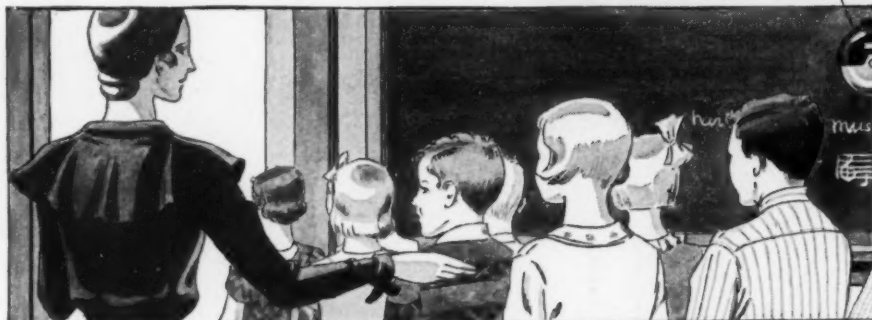
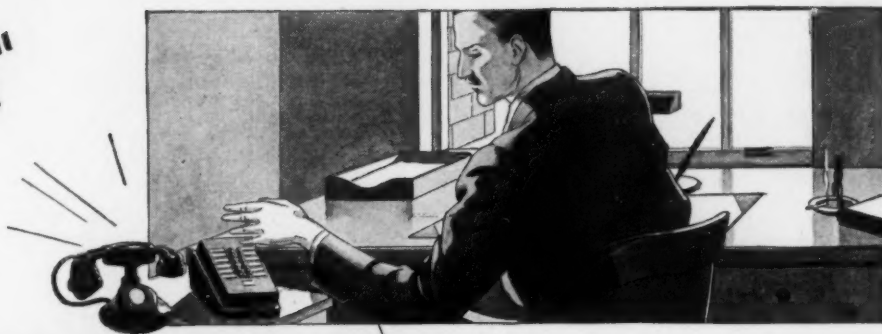
To reduce the 60 per cent heat loss through the window glass and reduce infiltration, storm sash may be used. This, however, is neither practicable nor economical for any but the very small school building. Another and more practical method is to use double glazing with an air space between the panes. With a double glass and one-quarter inch of air space, between from 30 to 60 per cent reduction in heat loss is obtained depending on the atmospheric conditions inside and outside the room.



Double glazing also has an insulation value in room cooling, prevents frost and condensation from forming on windows of rooms having a high humidity and has some sound insulation value which may be considered.

Double glazing has been simplified by the use of Thermopane made by Charles D. Haven, Milwaukee. The two panes are separated by  $\frac{1}{8}$ -inch or  $\frac{1}{4}$ -inch spacer strips and held in an elastic cement around all four edges of the glass. The elastic cement allows expansion and contraction of different lengths for either glass without breaking the hermetic seal. The air space is chemically dehydrated so that no deposit of moisture can take place on the inside of the double glass unit. Thermopane may be made up with flat glass, of any kind,

"Principal!"



"Fire drill!"

"Classes change!"



"Report to office"

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strength or texture and having at least one flat smooth surface. This glass can be handled and set exactly the same as ordinary window glass.

This attention to the details of window construction is especially important in the school building since such a large area of exterior wall space is taken up with windows. Also the use of a great amount of ventilating equipment for exactly proportioning the air supply to the demand means that hermetically sealing the windows of the classroom against air infiltration and consequent heat loss is desirable.

To analyze the cost of installing and maintaining such window treatment and to determine its advisability, the items to be considered are:

The first cost of glazing will be increased from six-tenths the cost of the building to approximately one and two-tenths.

With a lower heat loss through the windows, smaller steam piping, smaller unit ventilators and smaller boilers may be used, and certainly there will be a saving in smaller pipe.

If the saving made in the installation of the heating system does not offset the added cost of glazing, then the carrying charge of the extra investment must be deducted from the saving in fuel cost.

A further deduction from the total saving in fuel consumption must be made for the added cost of breakage replacement. Instead of figuring the usual two and one-half square feet of glass per room per year this will be increased to five.

When these credits and debits are balanced against each other it will be found that an actual saving of 15 to 30 per cent of the annual fuel cost will be made.

### Increasing the Brilliance for 16m/m Film Projection

Brilliant illumination for motion picture films is one of the essentials for auditorium projection. The long distance between the projection machine and the screen, and the large size of the screen image necessitate the use of high intensity lighting. This brilliance may be supplied in several ways: by great intensity of light source and by such mechanical means as reflectors and lenses for gathering and concentrating light.

Two companies have recently supplied their 16 m/m projectors with devices that increase the light intensity for long range projection. The Ampro Corporation, 2839 North Western Avenue, Chicago, has a new projector that uses a 400-watt biplane filament lamp containing two rows of staggered filaments. This lamp is to be used when

it is desired to project pictures up to a hundred feet. This new high intensity lamp may also be used with the Kodacolor Film when extreme brilliance is necessary for projection. This new model does not require a change of condenser lenses for the projection of colored films; it requires merely the insertion of a supplementary color lense. The 200-watt lamp may also be used in this machine interchangeably with the 400-watt.

This new model has the automatic pilot light, which lights when the projector is stopped; it has tilt control for centering the picture on the screen, an automatic rewind and a simplified method for threading the film.

The Victor Animatograph Corporation, Davenport, Iowa, has developed a new optical system for use on the 16 m/m projectors, which increases the brilliancy of the screen image. The Hi-Power system is for use in daylight projection, and for long distance projection of a hundred feet or more. It consists of a reflector adjustably mounted in a special lamp house extension, a set of bull's-eye condensers and a more powerful projection lense. This improved optical equipment is for use with any type of lamp for increasing the screen brilliance, and may be installed easily on the Victor projectors.

### Special Devices on a New Standard Typewriter

A standard typewriter that has been designed for quietness and speed of operation and convenience of adjustment is a new product made by the Burroughs Adding Machine Company, Detroit. The sturdy construction and mechanical safeguards that have been used on this machine should result in long life and low maintenance costs even under rough or careless usage.

The convenience of adjustment which is all accomplished from the front of the machine will speed up production. Margin stops are placed on the front of the carriage, and tabulating stops can be aligned without the operator rising from his chair. The adjustment for red or black ribbon or for stencil cutting is on the face of the machine, as is the manual ribbon adjustment button which allows a combination typewriter and duplicating ribbon to be used.

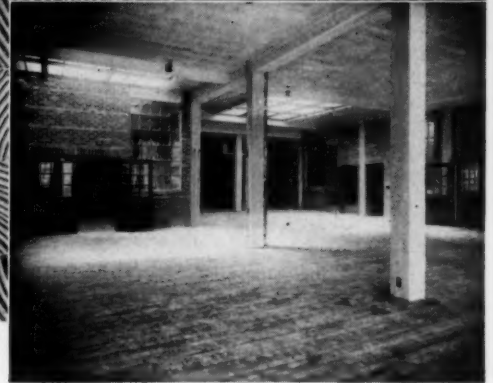
The carriage of the machine has a double support and ball bearing rollers so placed that the action is smooth and rigidly controlled. A new type of variable line spacer is attached to the platen knob, and the platen knob has a soft rubber rim that offers a firm grip. The paper feed construc-



## No Other Flooring Material Has This Unique Natural Beauty

Nothing else can equal the natural beauty of the wood as revealed in a Kreolite Flexible Strip End Grain Wood Block Floor. The processing of the blocks preserves the natural color and accentuates the unique and ever-pleasing patterns made by the annual growth rings of the Redwood and Yellow Pine.

And here is something beautiful that defies wear and time, and that provides the resilience, comfort and quiet that are so necessary in a floor. Kreolite floors stay just as they are laid in both position and appearance. The first cost is very low. There is no upkeep or replacement expense. Quite naturally Kreolite floors are the outstanding choice for the most important school buildings under construction today. Write for information.



*A typical new high school provides Kreolite End Grain Wood Blocks for the Mechanical Drawing Room, the Wood and Pattern Shop, the Auto Service Shop, the Forge Shop, the Supply Room, the Tool Room, the Lumber Storage Room, the Finish Room, the Instruction Room, and all passage ways.*

*The illustrations show a section of one of the rooms in this new high school and a closeup of the modernistic design revealed by the annual growth rings in the end grain blocks. A metal wire truss binds the individual blocks into compact, monolithic-like end grain planks or strips. Each block is anchored to the base in a bed of mastic.*

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• **Flexible Strip Wood Block Flooring** •

tion permits writing to the exact bottom of the sheet of paper, and the card holder allows this to be done with a small calling card.

Both right and left shift keys may be locked, and their operation lifts the platen only, leaving the carriage resting on its track. This type of balanced shift permits a more durable carriage construction and tends to increase its length of service. The platen is eleven inches in length to permit the insertion of standard letter paper, lengthwise.

The machine although not noiseless has been



*This standard typewriter has been designed for quietness and speed of operation and convenience of adjustment.*

made quiet in operation. All parts of the case are lined with sponge rubber and rawhide contacts have been used wherever possible.

The machine is almost entirely enclosed in a black enamel case, with black crystal panels at the sides, the back and the front. The panels above the keys and below the platen prevent erasure debris from falling into the mechanism. This protection from dust and dirt should reduce to a minimum the need for servicing these machines. Should the side panels become scratched and worn they may be easily removed and replaced. The fittings are chromium plated throughout, and will require only wiping with a rag to restore them to brightness.

Sturdy construction and good materials have been put into this typewriter with the idea that quality is economical when long service is desired.

## A New Wall Finish That Reduces Time and Labor Costs

A new flat wall finish that may be tinted any color is being made by the U. S. Gutta Percha Paint Company, 19 Dudley Street, Providence, R. I. The ease of flow or "slip" from the brush is considered one of its qualities that will speed up painters without hurrying them; and the 16 to 50 per cent greater covering power that is the result of the easy flow of paint from the brush should reduce both time and labor costs. The smooth surface of the paint is both dirt and dust resistant, and makes repeated washing possible without excessive harm to the paint.

## A Tractor Lawn Mower for Schools With Large Grounds

A tractor mower that has a 70-inch width of cut, is operated by one man and has a capacity of two to three acres an hour, has been developed by the Ideal Power Lawn Mower Co., Lansing, Mich. This is an intermediate size mower between the single unit power mower and large tractor mower.

In selecting any piece of mowing equipment, the buyer should be sure to make a careful check on such items as power, clutches, transmission and other mechanical details to determine the required maintenance and depreciation, and the method of operation.

The Junior Triplex mower is steered by its own power and is flexible in its movements. It will turn around in its own length and can trim around trees, along walks and driveways and into corners. Two levers control the operation—the levers are pushed forward to go ahead and pulled toward the rear to back up; to turn to the right or left one lever is pushed forward and one pulled back depending on the direction of the turn.

The motor is a LeRoi, a 10-h. p., 4-cylinder, 4-cycle vertical type that develops a speed of from two to six miles an hour. The overall length of the mower is 9 feet 6 inches, and the width is 78 inches. The wheels are 12 inches wide and 30 inches in



diameter, and may be equipped with rubber tires.

The cutting units are of the 25-inch Bulldog type, with two units pushed ahead of the tractor and one unit pushed beneath the tractor just back of the driving wheels. The cutting units are so spaced that all grass is cut before being pressed down by the tractor wheels. These cutting units have seven blades so that they may be used in heavy thick grass as well as light grasses. The cutting units may be raised by a lever whenever an obstacle that would injure the blades is in the path.